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Focus is on the duties of an administrator in establishing a reading clinic. Learning difficulties and characteristics of severly disabled readers are listed. Current approaches such as the university clinic, public school clinics, and mobile clinics are shown, and working examples of each are cited. Considerations of use, financing, and responsibility in organizing a clinic are noted, and techniques for selection of children who will use the clinic are given. Staffing and training, testing, materials purchasing, services offered, establishment cost, and steps for setting up a clinic are described. A bibliography, a sample booklist for a reading clinic, and a roster of university reading clinics that treat severe reading disabilities are included. (JB)

Final Report, Interpretive Manuscript #2

March, 1969

"Establishing Central Reading Clinics--the Administrator's Role"

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Mary C. Austin, Case Western Reserve University; William Durr, Michigan State University; Leo C. Fay, Indiana University; Julia Haven, U. S. Office of Education; Elizabeth Hendryson, National Congress of Parents and Teachers; Richard Kirk, David-Stewart Publishing Company; Ralph Staiger, International Reading Association; Edward Summers, ERIC/CRIER; and Carl B. Smith, Chairman, Indiana University.

The research data bank of ERIC/CRIER, Clearinghouse on Reading, Indiana University, was used in the initial information gathering stage of this project as were the Title I Reading Program files at Case Western Reserve University. *Reading Diagnosis and Remediation* by Ruth Strang, a book commissioned by ERIC/CRIER and published by the International Reading Association, 1968, was quite helpful in distilling the research. It contains a complete bibliography from the ERIC/CRIER data bank on the subject of reading problems.

We wish to thank the many people who assisted in gathering information, writing program abstracts, reacting to written copy, and typing: William Dowdney, Charles Mangrum, Mary Jean Woodburn, Beth Hansmeier, Mary Kathryn Dunn, Virginia Ollis, Deborah Reagan, and Andrea Price.

A special thanks also goes to the fine school systems which gave us guided tours of their reading programs. Those visited and contacted as part of preparation for this project are listed in the appendix of this book.

Foreword

Many people must make decisions about changing school programs. Before a program can be changed, parents, teachers, and school administrators must be committed to an idea or a program in order for it to be successful.

One of the areas undergoing rapid change these days is that encompassing the treatment of reading disability. This book is one in a series of four concerned with reading difficulties and adjusting school programs to solve reading problems. Our schools must face the questions of what they can do about reading difficulty. Each of the four books in this series directs its message to a specific person on a school staff. Each focuses on a different aspect of treating reading difficulty and what certain staff members can do to make treatment more effective. The books are directed toward four target audiences involved in treating reading difficulty, namely, the teacher in the classroom; the reading specialist within a school building; the principal treating reading difficulty related to environmental factors; and the top-level administrator working through a multi-service diagnostic center.

It would be unwise to read only one of the four monographs and expect to learn what schools can do to overcome reading difficulty. Each of the monographs is a part of the broad picture; all four parts should be read in order to visualize the scope of the treatment of reading difficulties at various levels. Naturally, the classroom teacher will attempt to deal with minor disabilities whereas the diagnostic service center will focus on the more severe types of reading disability. It is possible, of course, for an individual to read only that monograph aimed in his particular direction to discover what research indicates about activities in his area. He will find helpful descriptions of steps toward establishing programs designed to overcome certain types of reading disability. If he understands that the monograph is dealing with only a limited segment of the total picture, he can gain some perspective in his efforts to effect a change within his area of responsibility and influence.

The U. S. Office of Education contributed to the support of the preparation of these monographs since it believes that technical research information compiled by researchers and reported in research journals should be interpreted in a readable presentation to those who conceive and change programs in school systems. The monographs, therefore, attempt to summarize research findings related to a given topic and a given audience, to describe new and apparently successful programs within the limits of the topic, and to recommend methods on setting up these new programs. A primary intent of the monographs is to reduce the time lag between research demonstration of worthwhile projects and the implementation of these projects in school systems. Naturally the dissemination of information is necessary before change can take place. It must be noted, however, that knowledge concerning successful treatment of reading disability is only the initial step in bringing about change.

An individual with a strong idea and a definite commitment to the improvement of the instructional program and the services offered by the school is needed in order for change to take place. Someone has to be convinced that there are better ways of doing things and be willing to expend extra effort and time to bring about more effective teaching programs.

The overall strategy of these books is to look at reading difficulties ranging from slight to traumatic dimensions. Treatment, therefore, must move on many fronts, with various professionals working simultaneously. Thus, the ideal is to provide action by teachers, supervisors, and administrators. If, for some reason or other, these professionals fail to act on the problem in their respective spheres of influence, an individual is not prevented from mapping plans and initiating action appropriate to his responsibility. For that reason, each of the four documents concerns an individual in a particular area. Thus, an interested party is enabled to set up a program of his own, unconcerned with other fronts.

Each book contains:
a) interpretation of research on a set of causes
b) model programs aimed at overcoming the causes
c) steps for setting up a program (directed to specific leaders in the school system)
d) recommendations and guidelines for those programs

Each manuscript was preceded by a review of research conducted during ten years. Information gathered from visits to two dozen operating research projects also reinforces the descriptions of model programs.

Target Series Number Two is directed to superintendents and other top-level administrators and their roles in overcoming severe reading disabilities, that is, clinic cases. These administrators must make the final judgments and decisions concerning the establishment of a central clinic or service for these severe cases. The purposes of this book are to identify the clinic cases, to describe various kinds of clinics or diagnostic centers, and to give helpful data for administrators making decisions about setting up specialized reading clinics.

Definition of Terms

A number of terms will be used throughout these publications referring to roles of various persons involved in the teaching of reading. The following definitions should serve as a guide to the particular duties of each. These definitions, and analyses of qualifications for each of the roles, are taken from the Journal of Reading for October, 1968.

A reading specialist is that person (1) who works directly or indirectly with those pupils who have either failed to benefit from regular classroom instruction in reading or those who could benefit from advanced training in reading skills; and/or (2) who works with teachers, administrators, and other professionals to improve and coordinate the total reading program of the school.

A special teacher of reading has major responsibility for remedial and corrective and/or developmental reading instruction.

A reading clinician provides diagnosis, remediation, or the planning of remediation for the more complex and severe reading disability cases.

A reading consultant works directly with teachers, administrators, and other professionals within a school to develop and implement the reading program under the direction of a supervisor with special training in reading.

A reading supervisor (coordinator) provides leadership in all phases of the reading program in a school system.

Developmental reading instruction is characterized by starting at the instructional level of a child, helping him proceed at his own rate, and following a sequential series of reading activities. This kind of instruction is done in the classroom by the classroom teacher.

Remedial reading instruction includes the characteristics of developmental instruction as well as guidance for children who read at two or more years below their capacity or grade level. This instruction is given in a clinic or special classroom.

Corrective reading instruction, like remedial instruction, includes the aspects of developmental instruction, and deals with children who read up to two years below capacity or grade level. It is given by the classroom teacher in the regular classroom.

INTRODUCTION

John Steinbeck has said, "Learning to read is the most difficult and revolutionary thing that happens to the human brain."

Despite the difficulty of the task, most adults who went through the public school system twenty or twenty-five years ago did learn to read and they are baffled by evidence that a large proportion of children today are not learning to read at all or acquiring only limited ability in reading.

The reasons for today's failures are many: more children in school, larger classrooms, more complex psychological problems, more distractions, less compulsion to learn, and insufficient money to provide personnel, space, and materials to cope with all the other problems. Furthermore, when recalling the good old days, it is easy to forget that those who could not learn quietly dropped out of school, taking their problems and failures off the record.

The truth is that, until fairly recently, not a great deal was known about reading problems, why some children learn and others do not, what kind of training to give to those who teach reading, what materials best facilitate learning to read, and what separate skills combine to turn an illiterate child into a discriminating reader. In the past two or three decades, various disciplines have discovered more about basic skills than was known previously. With the infusion of funds to support experimentation and innovation, more new approaches have been tried in the past few years than ever before.

Cooperation Needed

No one person can solve all the reading problems in a school district nor can any one type of activity satisfy all needs. Every school system has various reading difficulties ranging from slight misunderstandings of rules to severe disabilities with accompanying psychological and social deviations. A comprehensive reading program, therefore, includes the diagnosis and treatment of reading problems of all types, from slight to severe. The program must take into consideration methods of correction by a classroom teacher to treatment by a clinician. Without that range of treatment, some children will severely suffer serious defeat in learning to read.

The classroom teacher, the reading specialist, and the adminstrator all provide necessary components in a workable, comprehensive reading program. When one or more fails to make the contribution called for by his role, he destroys a significant part of the program. The classroom teacher provides the diagnostic and corrective bases. He must identify problems and apply corrective treatment in the classroom or refer the child to someone who can give the needed treatment. If the classroom teacher discovers that the child needs additional diagnosis or treatment on an individual basis, he sends the child to a remedial reading teacher (reading specialist).

The reading specialist works with individuals or with small groups and provides specific and concentrated treatment for as long as the child needs help. Estimates place 10% - 25% of the school population in need of specific help in reading.* The specialist and the classroom teacher remain in constant touch, cooperating in their work with the individual child to bring him to satisfactory reading performance. Often a specialist will work only in one school building or share his time between two buildings.

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*Strang, Ruth, Reading Diagnosis and Remediation, International Reading Association, 1968, Newark, Delaware, page 2.

When the remedial reading teacher (a reading specialist) divides his time among four or more schools, it has been found that he has neither the time nor opportunity to keep in touch with the classroom teacher concerning the progress of students in his remedial classes. Thus, the classroom teacher cannot re-informce the activity in the remedial class -- he may even counteract it -- and the remedial teacher does not get feedback from the classroom teacher as to interests and attitudes observed while the remedial treatment is going on.

Should the remedial reading teacher within a school building find that working with reading skills and providing extra practice on an individual basis does not bring satisfactory results, he must refer the child for more specialized diagnosis. Such diagnosis usually takes place at a reading or a learning disabilities clinic.

It is estimated that 1% - 5% of the school population needs highly technical diagnosis and treatment for severe reading disabilities which may be rooted in emotional, social, or physical problems, (Strang, 1968, p. 2). This clinical diagnosis and treatment needs the support of the cental school administration. Funds, communications, support, and encouragement for a comprehensive program must come from the top-level administrator and unless this administrator, the principal, the reading specialist, and the classroom teachers see reading problems from various levels and work with one another in referrals, treatments, and evaluations, not every child with a reading problem will get needed help.

It should be evident, therefore, that a comprehensive attack on reading problems comes about through the cooperation of many people. It is quite possible for the classroom teacher to do a quick diagnosis of reading problems and then engage in corrective activities in her classroom without the additional services available within a school or school district. But, normally there will

INSERT FOLLOWING CHART "EXTENT OF READING DISABILITY" FOLLOWING THIRD PARAGRAPH ON PAGE 3.

Extent of Reading Disability

Severity of Disability and Symptoms	% of Students Involved*	Program Responsibility
I. Severe Reading Disability - may show evidence of physical, psychological or neurological interference - may display perceptual difficulties - may be classified as non-readers - usually require clinical treatment	1-5%	Central Administration (Clinic facility)
II. Moderately Severe Disability - read significantly below capacity level - lack basic reading skills - need remedial assistance outside the classroom	10-25%	Principal, Reading Specialist (Local school program)
III. Mild Disability - lack some reading skills and understandings - need individual help (for direction and practice) - can be treated in regular classroom	40-60%	Classroom teacher

* The percentage of students varies from one school system to another depending on the make-up of the school population. (Strang, 1968).

several children in every classroom who need attention beyond that which the classroom teacher can provide. Those services outside the classroom must be made available through combined cooperation of classroom teacher, principal, reading specialist, and central administration. Even within the classroom, the teacher will need financial support in order to have sufficient materials needed for a variety of diagnostic and corrective activities. This support evidently must come from school finances. Often the need for corrective activities is not easily detectible to the outsider, ~~hence~~ cooperative action becomes of even greater importance.

CHAPTER I PRIMARY LEARNING DIFFICULTIES - The Administrator's Problem

Children Who Do Not Read

There are children who do not learn to read, even though they have average or above average intelligence. The validity of the problem was established by an English school doctor as early as 1896.* Extensive research since then -- in England, Denmark, Germany, and the United States -- has shown the learning problems of these children to be of such a special nature that they can respond neither to classroom instruction nor to the usual corrective techniques.**

If specialized help, often on a one-to-one basis, is not provided, these children are usually condemned to lives of mounting frustration, their natural talents locked within them, the key to knowledge lying always just outside their grasp (Ellingson, 1967, p. 32). The recurring failure to reach them by the usual methods has turned more and more school systems to diagnostic clinics, for only here can children with such severe problems be offered the help they need.

Over the years, most clinicians and remedial teachers have found that remedial readers fall into two groups: those who can benefit from corrective instruction in the classroom or a small group, despite having a cluster of educational, motivational, and psychological problems coupled with possible visual or auditory impairment--and those who cannot (Kolson and Kaluger, 1963). The latter have severe reading disabilities, and they are the children who are discussed here as needing specialized clincial assistance.

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*Kolson and Kaluger, 1963, p. 17.

**Goldberg, 1959; Hermann, 1959; Orton, 1925.

Into whose province do severe cases fall? It seems safe to say that the school must play a larger role in diagnosis and treatment, for the problems are so unique that even enlightened parents cannot cope with them. Even where private corrective therapy is available, it is often prohibitevely expensive. Temple University laboratory school, for example , charges $1200 for a semester of therapy.

So there is, in fact, little help for most children with severe reading disabilities, except through carefully planned school-connected programs, programs which must be instituted by top-level school administrators. They alone have the overall control, influence and, manipulative prerogatives to establish the kind of service required for this specialized problem. The administrator must determine the extent of severe reading disability in his district, what type service best fits his school system's needs and what personnel and financial assistance he must have to provide that service.

Characteristics of Severely Disabled Readers

The population in question includes from 1% - 5% of the school system, depending on the nature of the school district.(Strang, 1968, p.2). Most seriously disabled readers have little self-confidence. They have seen their classmates learn readily what they fail to learn. They have come to believe that their own stupidity is holding them back. Moreover, they have been told, directly or indirectly, by uninformed parents and teachers that they are simply lazy or stubborn and that a little more effort would achieve reading ability in no time (Kolson and Kaluger, 1963, p. 4). Some tend to believe this and may conclude that it is impossible for them to learn to read (Strang, 1968, p. 70).

Severe reading disabilities are deep-seated. They are often described by such imposing--and often imprecisely used--terms as minimal brain damage, dyslexia, and perceptual handicap. These disabilities are not related to low intelligence, for children with severe reading disabilities are often above average in intelligence. Such eminent scientists as Niels Bohr, Thomas Edison and Albert Einstein are believed to have had severe reading difficulties.

Some of the labels attached to people with severe reading problems may lead teachers and parents to think that there is a specific cause and, therefore, a direct remedy, as with a bacterial infection which can be treated with penicillin. Such cause and cure relationship does not exist. Each case of severe reading disability requires an individual approach. There is no one single problem, nor a single approach to treatment.

Children with severe reading difficulties usually have a syndrome of problems. One widely used description of a syndrome lists five major symptoms, including inability to recognize letters and words, difficulties in the visual and motor memory of letter shapes, difficulties in writing letters, difficulties in distinguishing right form left, and difficulties in placing digits serially to form a number (Kolson and Kaluger, 1963, p. 30). "Doc, I've got it up here," one child said, "I just can't get it down my arm."

No general description can accurately fit any single child with severe reading difficulties, save the observation that seven out of ten times it is a boy. He can have all or any of a combination of physical, emotional, neurological, and instructional problems.

Visual Perception Problems

Visual perception problems generally fall into three categories: 1) difficulty in distinguishing between separate objects, 2) difficulty in recognizing parts of a whole, and 3) difficulty in synthesizing or combining parts to form a whole. Children with perceptual problems may, for instance, perceive only the initial letters of a word, thus confusing "horse" with "house." The problem may be in distinguishing similar letters, so that "b" appears the same as "d" or "u" the same as "v." Children tend to reverse letters, writing "brid," for "bird," or reverse words and even phrases. They may regularly omit letters from words or substitute one simple word for another. They usually have difficulty in distinguishing figures from their background. They may exhibit mirror writing (Kolson and Kaluger, 1963, pp. 30-32).

Psychomotor Disturbances

Children with psychomotor disturbances may have confused directionality and poor left-right orientation, a distorted idea of their own position in space, and trouble making appropriate adjustment in body position, for example, when told to touch the left knee with the right hand (Strang, 1968, pp. 51-52). They show poor motor coordination and poor drawing and copying ability.

Auditory Perceptions and Speech Problems

The child who has a deficiency in auditory perception may have difficulty in distinguishing between similar sounds, such as "p" and "b" or "g" and "v," as well as in blending sounds together or in matching sounds. His speech development, as a consequence, is slow.

Problems of Memory and Association

Either visual or auditory memory may be deficient, so that children with these problems will have trouble recalling the image of a letter or remembering its sound. In writing the letter "z," for instance, they must depend on rote memory of the three directions which the line forming this letter takes, rather than a mental picture of the letter.(Kolson and Kaluger, 1963, p. 31). In writing "heavy," they may drop the first vowel sound and attempt to write only the three letters "h-v-y," and in the motion of writing, blend the three together so that they come out "hy." (Kolson and Kaluger, 1963, p.32). Their problems of association center on difficulties with the concepts of time, size, number, and spatial direction.

Emotional Problems

Children with severe reading disabilities are subject to tension, anxiety, and frustration. Their attention span is often short, and they may find it difficult to work independently. Many are easily distracted. The emotional problems may not have caused the reading difficulties but, instead, have stemmed from them. Whether first or last, they have to be dealt with.

The Dimensions of the Problem

Successful treatment of severe reading problems depends not only on an individualized program, but also on a program that diagnoses various other aspect of the child. Building up the ego is as important as diagnosing specific strengths and weaknesses in tailoring a suitable program for each child (Kolson and Kaluger, 1963, p. 42). Obviously, a strictly look-say approach is as inappropriate for the child with deficiencies in visual perception as a strictly phonics approach is for the child with problems in auditory perception. To overcome visual perception deficiencies, visual training exercises may include eye muscle training--following a bouncing light from left to right--or practice in depth perception--concentrating on different colored posts placed at various distances from the viewer. Children with visual-motor disabilities may be given coordination exercises--practice on a walking board or tracing grooves in templates. The training will depend upon the specific needs of the child. It should be noted here that the relationship between visual-motor disabilities and teaching reading is based on correlation studies which cannot impute a cause-effect relationship. Some authorities questions the wisdom of any kind of *mass* emphasis on visual-motor coordination activities as a treatment for reading disabilities. Usually the treatment, as well as the diagnosis, must be on a one-to-one basis, at least in the beginning. There is no point in minimizing the time involved. It may well be years. For the administrator that means a very low teacher-pupil ratio -- one that takes a very high per pupil cost.

While the number of such severely disabled readers has often been exaggerated--some estimates range to as high as 40 percent of the school population--those who clearly need clinical treatment have been conservatively estimated at 1% - 5%.(Strang, 1968, p.2). Even that estimate, however, is enough to cause widespread concern on the part of school authorities. In a city the size of Detroit, for instance, with some 300,000 children in the public schools, it means that 15,000 children probably need some kind of clinical help. Even in a system the size of that in Kettering, Ohio, with only 15,000 students, there may be 750 who need clinical help.

This situation poses agonizing problems to top-level school administrators who fully recognize their obligation to all children entrusted to their care but at the same time are acutely aware of the practical limitations of time, space, personnel, and money. Yet many systems are moving ahead despite the practical difficulties and are showing promising results. Some of these programs are described in the next section

The University Clinic

The university clinic may often serve the school administrator as a model. Generally it offers the best available archtype in the diagnosis and treatment of severe reading disabilities. Because it does not face the pressing demands or sheer numbers of a public school system, it can deal with far fewer cases and can offer more comprehensive diagnostic and treatment services. In addition, the university clinic contributes valuable research to the field, provides consultation service to the public schools, and trains diagnostic clinicians to serve in the public schools. Temple University's reading clinic and laboratory school in Philadelphia is one example.

Temple's clinic diagnoses the reading and learning difficulties of any child referred to it. The battery of tests usually takes two days to complete, covering a wide range of physical, social, psychological, mental and intellectual factors. Besides screening for visual, auditory, neurological, and speech impairments, the tests measure:

- intellectual functioning (IQ)
- word recognition skills (sight vocabulary, word perception, oral and silent reading skills, skimming ability)
- spelling
- auditory and visual discrimination
- learning aptitude (memory span, attention span, language and cognitive development)
- lateral and perceptual motor coordination
- social and emotional adjustment

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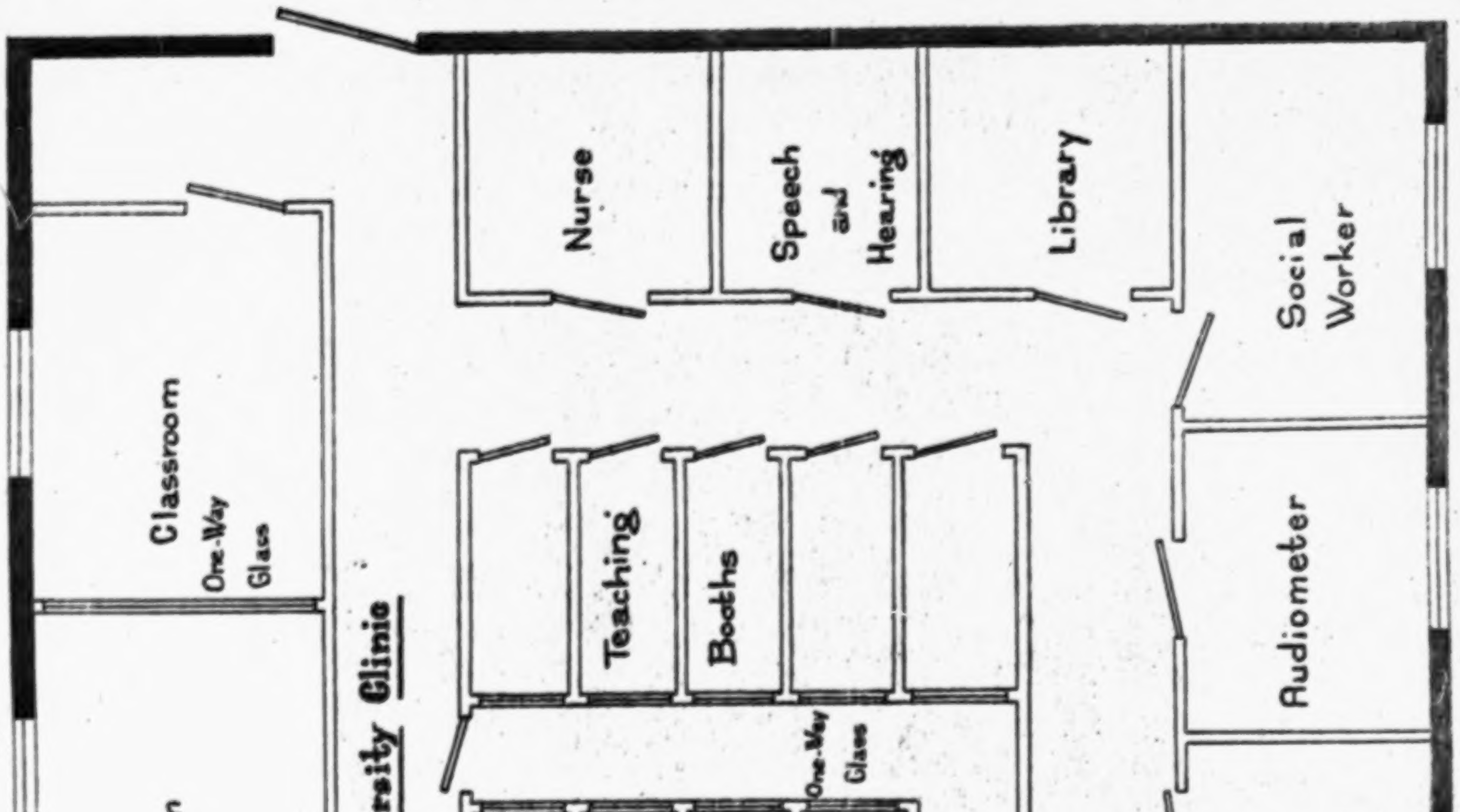
University Clinic
Classroom
One-Way Glass
Classroom
Secretary
Nurse
Speech and Hearing
Library
Social Worker
Teaching Booths
One-Way Glass
Teaching Booths
Tunnel
Audiometer
Vision Screening
Clinician
Clinician
Clinician
Clinician
Psychologist

An informal reading inventory is also given, as is a standardized achievement test. From an interview with the parents, a developmental case history--including prenatal care, the number of other children in the family, family circumstances, and school history--is prepared. Psychiatrists, social workers, and neurologists are called upon when necessary. The results are written up in a form that parents can understand, and recommendations are made which can be carried out by parents, tutors, or classroom or remedial teachers, as the case may be. The clinic tests nearly 900 children a year and those with severe reading disabilities may be recommended to the University's laboratory school.

The lab school occupies two gray buildings, former barracks, several miles distant from the University. A tuition of $1200 a semester is charged, and children stay an average of two years. Some have gone on to college, others to vocational schools. There are approximately 80 children enrolled, ranging in age from seven to twenty. The staff includes eleven full-time teachers, ten part-time teachers, and a part-time psychologist. The lab school is nongraded, and the children are grouped and regrouped during the day in sections ranging from three to nine. Two staff members attend every class, and one or more graduate students, working toward their masters' degrees are also in attendance. The children come from neighboring states and from cities as far distant as Denver.

The atmosphere of the school is one of easy purposefulness. Each child carries with him a clipboard to which is attached his own day's assignments. Opposite each assignment is space for the teacher's frank comments. By the end of the week, the daily log charts a record of his progress. The focus is mainly on the language arts--listening, speaking, reading, and writing--but

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CONCERNING LAST PARAGRAPH ON PAGE 12

mathematics, history, geography, science, and related areas are included at appropriate stages. The avenues to learning are not only visual and aural, but tactile (touch) and kinesthetic (body movement) as well. The child is started at his present reading level and moved along at a pace he can handle.

For a certain period in the morning, for example, a boy may be working alone on words he missed the day before. No bell rings, but he suddenly puts his list aside and joins a reading group forming in the room. This group will have problems similar to his in spelling, word recognition, or whatever. When the group reading lesson is over, he turns to his next assignment for the day. He may carry a metal box containing the words he has mastered, each on a separate card, and if it is time for him to write a story of his own, he will use them and ask a teacher for others that he needs. This pattern will undoubtedly insure for him some sense of accomplishment at the end of the day.

Diagnostic testing is an on-going procedure, and the children in the lab school are retested formally twice a year, though not as comprehensively as in the initial diagnosis. Their training is revised accordingly. Usually a dozen or so children in the lab school, almost ready to return to regular school, are in a transitional class, more structured and with greater conformity to the type of classwork they will face when they return to public schools. The public schools have generally been cooperative in placing them at the appropriate grade level.

No report cards are issued, although parents receive letters reporting on the attitudes and progress of their children. In addition, parental interviews are held at intervals.

It seems, indeed beneficial to be able to take children with severe reading disabilities completely out of the regular school system for a year or more and give them the intensive individualized help they need. Also it is beneficial for reading clinicians to have masters' degrees representing

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CONCERNING FIRST PARAGRAPH ON PAGE 13

thirty to thirty-eight hours of graduate work in diagnostic practice and clinical treatment. But the average public school system must consider the expense, the time, and the personnel needed to duplicate such a university program. Frequently, the public school administrator must make some compromises with a model such as that offered by Temple University. But a model serves primarily to provide ideas and need not be imitated slavishly.

The Philadelphia public school system, for example, which surrounds Temple University, is a system which uses some elements similar to the Temple University clinic, with adaptations that suit its needs and finances. Philadelphia's diagnostic clinic has a staff of two directors with doctors' degrees, a secretary, and five teachers in a treatment center. The directors are charged with many duties in addition to testing, including in-service training experiences for reading teachers. About four children a week receive the diagnostic test battery that requires some three hours to administer. The clinic offers remediation for those with serious disabilities in a laboratory school or treatment center located in an elementary school. The lab school has three full-time teachers who can give individual training to some forty-three children one hour a week. A coordinator and a part-time teacher augment the lab school staff.

Once a week, in-service training is offered at the clinic and at the lab school. Under supervision, these in-service teachers give individualized instruction to a child at the lab school, while those who have completed the course help other children in their home schools, Through this in-service training program, the Philadelphia clinic offers service to children and provides a means for encouraging diagnostic teaching.

The waiting list at both the lab school and the clinic is long, and the directors of the program readily admit they cannot test all the children who show symptoms of severe disabilities. They would like to see a clinic and lab school in each of Philadelphia's subdistricts, and the present clinic program is pointing up the need. It is indeed a start.

Public School Clinics and the Ripple Effect

Many school systems, realizing they cannot provide immediate help for all who need clinical treatment, have nonetheless taken the first steps to reach as many as possible. Their programs have a ripple effect, involving not only students, but teachers and schools as well, and the benefits spread wider and wider as the program continues. Many show promise in a number of ways.

For the sake of convenience, the programs outlined here have been divided into three categories, according to the emphasis. The program may be designed to reach students directly, train teacher, or cover the greatest number of schools. It is understood, of course, that such aims overlap, since training teachers is a method of reaching students, and many programs place equal emphasis on all three goals.

Sketches of Some School Clinics Emphasizing Student Assistance

Columbus, Georgia

The reading clinic at Columbus, Georgia, takes a thousand children from the first through the twelfth grade for training two or three times a week. The staff numbers twenty-nine professionals and paraprofessional persons, and each teacher has five daily classes of eight children. Only children who are two years or more behind grade level (5,000 are in Columbus' Title I schools) are admitted, after an hour's diagnostic testing. The emphasis of the program is on word analysis, comprehension, and reading rate. It is interesting to note that the Columbus program reaches out into the community as well, with an evening adult education program for public employees, such as postoffice workers.

This type of clinic aims at teaching groups of children and evidently cannot engage in the in-depth diagnosis and individual treatment described in the Temple University model.

Buffalo, New York

Designed for children from the second through the sixth grades, a program is also being staged in Buffalo, New York. The children are bused to the reading center daily for sessions from a half-hour to an hour. Clinicians work with the children in small groups. In addition, five teachers are given a year's in-service training in remedial reading at the center. They are completely freed from their classes and paid a regular salary for the year while learning and working at the center.

Robbinsdale, Minnesota

Some school systems narrow the grade range in order to cut off seepage. In Robbinsdale, Minnesota, for example, three reading centers have been established to serve 180 students with severe reading disabilities in grades two through four. Students from sixteen public and four private elementary schools are transported to the centers for daily 90-minute sessions in groups of four to eight. The program involves a director, twelve remedial reading teachers, and a special services staff.

St. Louis, Missouri

St. Louis, Missouri, which began reading clinics over two decades ago and has expanded their number to seven, not only treats the children but trains classroom teachers. Each St. Louis clinic has a staff of four teachers and a secretary. A school physician and nurse are assigned to the clinics at regularly appointed times to administer the physical examinations. The school social worker lends a hand when needed.

Each clinic consists of a large, cheerful, book-lined central room with three or four small teaching rooms and an office. A wide variety of books and teaching materials is available as well as all necessary equipment for diagnosis and specific remediation.

After diagnostic testing, the clinic provides treatment for those with severe disabilities and follows up after the treatment is completed. Periodic follow-up reports on clinic cases have had an excellent effect on teachers and administrators as well as the child, giving him the advantage of continuing interest. Class periods are usually forty-five minutes, an hour, or an hour and a quarter. An effort is made to schedule pupils when they can be most readily excused from classroom instruction. Depending on the extent of his disability, the child is either treated on a one-to-one basis by a skilled remedial reading teacher or in a group of three or four other pupils.

Sketches of Some Clinics Emphasizing Increased School Coverage

DeKalb County, Georgia

The reading clinic of DeKalb County, Georgia, works with children and also trains remedial reading teachers. It hopes to establish a "satellite clinic" with a remedial reading teacher in every one of the county's schools. Three years after the program began (in 1965), it had trained enough remedial teachers to set up "satellite clinics" in forty-six schools, reaching almost half of the county's hundred-odd schools. Its pace has a slight edge on the county's growth, which sees thirteen new schools a year.

The central clinic diagnoses any child referred there and treats those with the more severe problems. Two-and-a-half years after the program began, it had tested 525 children and treated 121.

Children are referred to the clinic by their teachers, through the school principal. The clinic accepts referrals who are behind grade level but not mentally retarded. How far behind they are depends on the grade level. First graders need be only five months behind, sixth graders two years or more below grade level.

The child referred to the DeKalb clinic receives four hours of testing to determine his specific reading difficulties. An hour's psychological test usually has already been given him at his home school. The diagnostic tests cover a wide range of factors, and the parents, who bring the child to the center, are also interviewed. After his difficulties have been pinpointed, the child may be returned to the classroom (with suggestions for help), referred to the satellite clinic in his school (if there is one), referred to other specialized clinics (for the emotionally disturbed, mentally retarded, or child guidance), recommended for a Learning Disabilities Class (which takes children with neurological and pathological problems for full-day across-the-board treatment), or accepted at the center for treatment.

The clinic treats twenty-five to thirty-five children a quarter. They come for an hour on staggered days, alternating three days one week and two the next. Tutored on a one-to-one basis, they remain in the program until they reach their potential or until it is felt they have been set apart too long. A junior high school student reading at the second-grade level was brought up to the eeventh-grade level after fifty hours in the center. Another student, reading at the pre-primer level, was reading well enough to get his driver's license after two-and-a-half years.

In the satellite clinics, children are taken in groups of five or less, again on staggered schedules, three hours one week, two the next. The grouping, as far as possible, is arranged according to the children's reading levels and reading disabilities. By 1967, nearly 1,000 children were receiving remedial treatment in the schools this way.

The remedial reading teachers in the satellite clinics are trained in the center. More than fifty teachers were trained in the center's first two-and-a-half years. The training sessions last nine weeks, during which the teachers are released full time from school. They are recommended by their principals, and upon return, are given time aside from their remedial reading classes to act as reading consultants and resource people to the other teachers in their schools and to hold interviews with parents. Satellite clinics in the Title I schools each receive $3,000 in federal funds for materials and equipment.

The clinic trains seven to ten teachers every nine-week sessions. The course is child-centered rather than textbook-centered, offering practical experience in diagnostic, corrective, and remedial teaching. Each trainee works with one child, under supervision. After completing the program, he receives an hour's in-service training every quarter. The director of the clinic maintains continuing liaison with him as well.

In a school system of 80,000 children, such as DeKalb's, it was obvious that a reading clinic was needed. The county school superintendent and supervisor of instruction had been planning for a clinic before a Title I grant of $400,000 set them on their way. In selecting an initial staff, a principal and a classroom teacher were urged to get their doctorates at the University of Georgia. One became the director of the clinic, the second succeeding him a few years later. Together they trained several clinicians and drew a few more from nearby universities. This was the nucleus of the program.

The clinic is located in the basement of the old Clarkston High School. Besides offices for members of the staff, there is a central meeting room, a library with 10,000 books for use in the clinic or for lending to schools, and four cubicles with bookshelves and blackboards, each monitored by a closed-circuit television system for in-service training and supervision. In addition, there is an observation room with a one-way window. In addition to the director, there are four full time clinicians on the staff who either have or are working toward their masters' degrees. They train the teachers, supervise their work with the children, and teach children in the center.

Detroit, Michigan

Detroit's clinic program is aimed at school-wide coverage in a somewhat different way. Portable buildings are set up at school sites, becoming a center for clusters of schools. In 1967, Detroit had three such Communication Skills Centers, each serving fifteen elementary schools. Each of the skills centers is staffed by a diagnostician, a psychologist, a social therapist, and six reading teachers. Children are referred by the feeder schools, through their classroom teachers and principals. On the basis of an informal reading inventory and past school record, chilren at the center are placed in small groups of five or six. Attendance is for an hour a day, four days a week. After beginning instruction, a child may be sent for additional diagnosis to the diagnostician, the psychologist, or the social therapist, whichever is needed. Otherwise, he remains with the reading teacher. Each center buses in 100 children a day.

Four days are given to instruction and the fifth is devoted to in-service training and planning. Often discussions of individual cases take place at staff meetings which are held at the lunch hour in order to include the principal and teacher from the home school.

Psychological testing is not the primary function of the staff psychologist. He acts more as a researcher in the field of reading problems, and often helps the teachers to formulate specific techniques for overcoming reading difficulties which they encounter. The social therapist's role at the center is also fluid. She establishes liaison with parents of children in the center, visiting them in their homes and alleviating the fears they may have when their children are singled out for special service. She also focuses on mental health, working in cooperation with the State Department of Mental Health. The center's diagnostician acts as the overall

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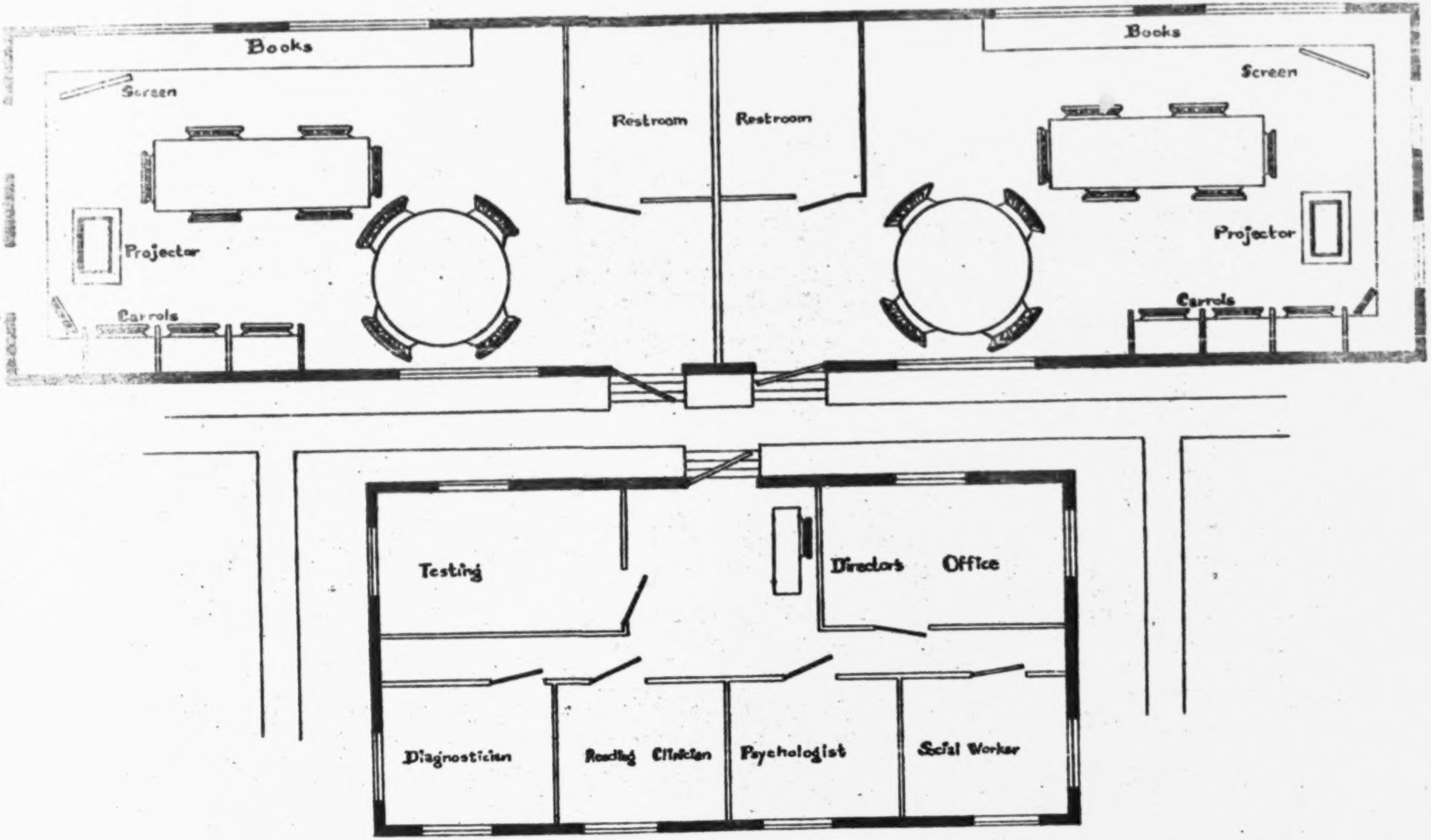
Books
Screen
Projector
Carrols
Restroom
Restroom
Books
Screen
Projector
Carrols
Testing
Directors Office
Diagnostician
Reading Clinician
Psychologist
Social Worker

Communication Skills Center

director, coordinating the program with the schools.

Mobile Clinics

Other school systems use mobile vans rather than portable buildings for various aspects of a clinic program.

Palm Beach County, Florida, uses three trailers, 12 by 45 feet, as remedial clinics, sending them to qualifying schools for one semester. Each trailer is staffed with a reading clinician, four reading teachers, and a secretary-aide. The reading clinician does extensive testing, and the four teachers carry out the instructional programs for seriously disabled readers. The children come for an hour a day and are handled on a one-to-one basis or in small groups of up to four. The program reaches children from the second to the fourth grade.

In a program involving forty-nine schools in Wisconsin, a mobile unit is driven to a participating school and remains there until diagnostic, physical, and psychological tests have been given to all children selected. The program was planned by a unique committee of school administrators, both public and parochial, school board members, and specialists from Wisconsin State University and the State Department of Public Instruction.

Headquarters for the program are located at the county courthouse in Appleton, and the staff includes fifteen reading teachers, a project director, two psychometrists, a technician, a psychologist, and a social worker. After diagnosis in the mobile unit, small groups of children whose I.Q.'s range from 80 to 100 and whose reading is below grade level (one year or more in the third and fourth grades, two years or more in fifth through tenth), are taken on by the reading teachers who visit them in their own schools for 150 minutes a week. The teachers work with no more than four in a group and undertake a teaching load of no more than fifty. The children stay in the program until they are reading at either grade level or at their expectancy level.

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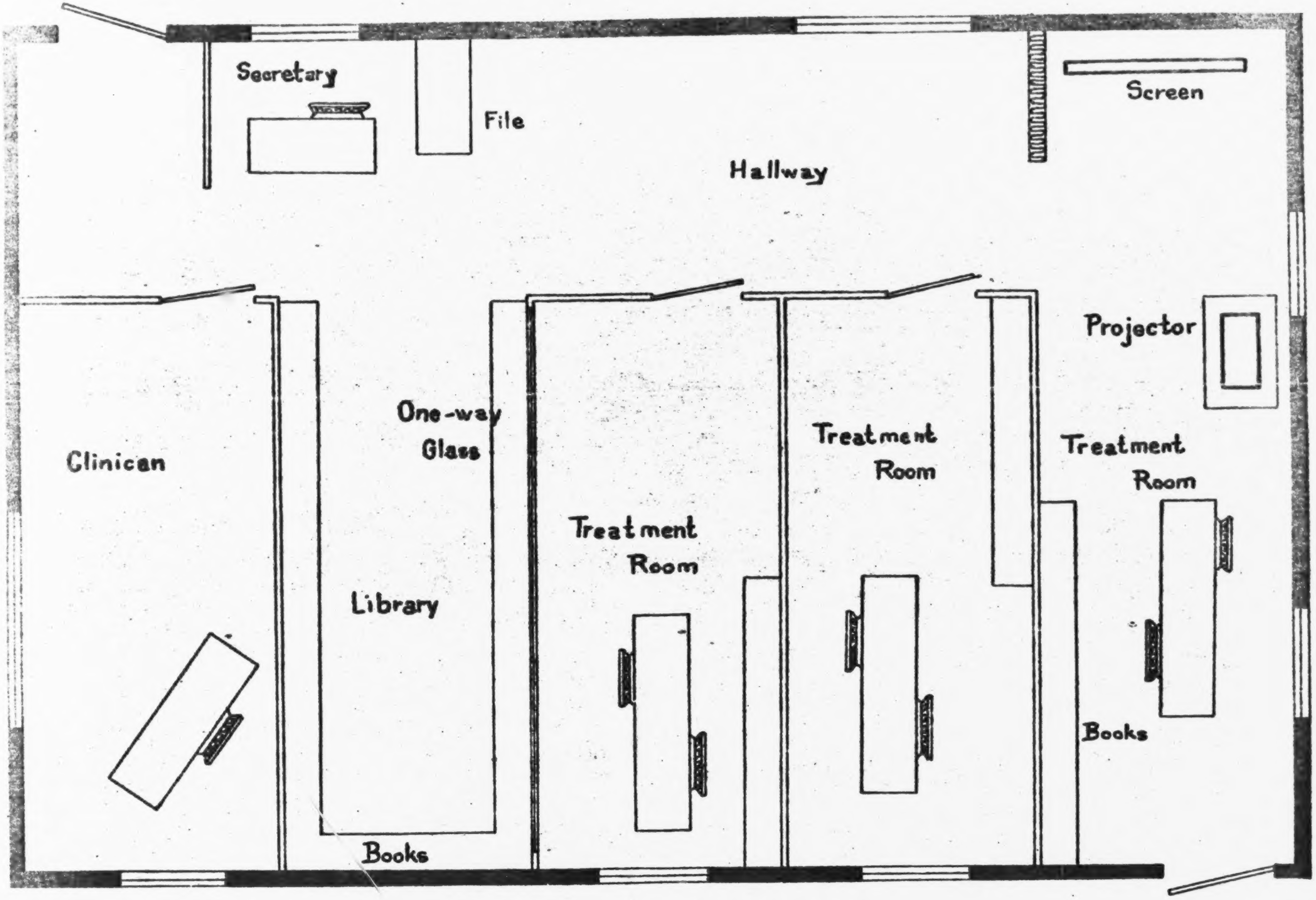
"TRAILER CLINIC" DIAGRAM


Secretary
File
Hallway
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Projector
Clinican
One-way
Glass
Library
Books
Treatment
Room
Treatment
Room
Treatment
Room
Books

Trailer Clinic

In Downey, California, a mobile trailer, fully outfitted as a diagnostic reading center, goes to the parochial schools in the district. An unusual feature of this program is that a substitute teacher travels with the van and takes over for the regular classroom teacher while a child is being tested. Thus the regular teacher can both ovserve the testing and supply useful background information to the clinicians. After the child is tested, a reading specialist demonstrates some of the multi-media, multi-level techniques for working with small groups of six to eight children, and the classroom teacher has an opportunity to work with the materials under the supervision of an expert and to borrow those materials appropriate for her problem cases.

Sketches of Some Clinics Emphasizing Teacher Training

Albany, Georgia

The primary aim of the clinic program in Albany, Georgia, is to train classroom teachers to identify problem readers and gain some understanding of their learning diffiuclties. The hope is that if the classroom teacher is more attuned to reading problems and their causes, fewer students will need remedial help in the future. For that reason, selected classroom teachers are brought into the clinic to learn about remedial reading.

In a school system of 21,000 children, it was clear that some kind of remedial reading program was needed in Albany. In half of the schools, the average elementary child was two to three years behind, the average junior high student three to five years behind, and the average senior high student three to seven years behind. With a $500,000 Title I grant, a reading clinic was set up to serve 18 of Albany's 46 schools.

The director of the clinic sets a limit on the number of children each school can send to the clinic, based on the school's population. The children are chosen, by the principal and teachers who have been trained in the clinic, on the basis of an informal reading inventory and the teacher's judgment. The children come to the clinic school daily for an hour for ten weeks. The clinic will take children capable of making progress, including the educable mentally retarded. The diagnostic testing in the clinic usually takes three hours but may take longer if necessary. The clinic provides remediation for 125 to 135 students every ten-week session. One session may be devoted to children from the elementary schools, the next children from secondary schools, and the third may be mixed.

The teacher-trainees come for a six-month period, one from each poverty school participating in the Title I program. After an intensive four-week period in which the trainees are introduced to diagnostic, remedial, and developmental theories and given practice in dealing with remedial cases on a case-study basis, their day is divided equally between work at the home school as a resource person and consultant and continued training at the clinic. During the training sessions, eight or nine university consultants give lectures on various aspects of reading disability and help the trainees in evaluating problems they meet. Reading assignments for the trainees in professional books and magazines are extensive. When they finish, they will have completed, under supervision, a case study of their own, including a prescription for remediation. They will have learned to evaluate the physical, social, and emotional factors involved in reading disabilities and to test oral and silent reading, listening ability, word attack skills, and so on. Trainees will be aware of the merits of different diagnostic testing procedures and acquire a knowledge of the characteristics of measure in standardized and individualized I.Q. tests. They will be able to recognize reading readiness in the classroom, at all levels, and come to know the various techniques and materials, from phonics and new alphabet systems to tactile and kinesthetic techniques used in treating spedific reading disabilities. They will have had practice in treating children on a one-to-one basis and in small groups. Upon their return to school, trainees will be better equipped to recognize severe reading problems, to individualize their programs, and to meet their students' needs. Although these classroom teachers are not expected to treat severe reading disabilities in their classrooms, their training experience in the clinic will enable them to identify and to refer serious problems to the clinic or another appropriate agency.

They do not necessarily return to school as reading teachers. Currently included in training, for instance, are a social studies teacher and a mathematics teacher. Some, however, may become remedial reading teachers. The others will be better informed in treating minor problems in the classroom and thus ward off some potential severe disabilities.

The clinic staff of thirty includes two part-time psychologists, two social workers, a speech therapist, four clinicians, and reading teachers.

St. Louis, Missouri

The clinic program in St. Louis, mentioned earlier, is also concerned with classroom reading teachers, who are assigned to the clinic for a year. During this period, they become familiar with test administration, gain an understanding of the causes of reading disabilities and their treatment and possible prevention, and learn more about the nature of severe reading problems. A year in the clinic also provides for these experienced teachers to gain additional perception of reading problems along with training in developmental and corrective techniques used in the classroom program.

Bell Gardens, California

Typical of a program that serves children, teachers, and schools is that in Bell Gardens, California, fifteen miles southeast of downtown Los Angeles. Under Title I, Bell Gardens, a low-income community of unskilled and semi-skilled workers and their families, established a clinic for elementary pupils with severe reading disabilities. It functions as a diagnostic and treatment center where specialists in speech, hearing, vision, social work, psychology, and reading work together to determine the cause of a child's inability to read and to prescribe a program to remedy the problem. The pupil stays in the clinical program until the staff is assured he has made sufficient progress to return to his classroom where his own teacher will continue the remedial work.

Six services are offered for the students, teachers, and administrators:

- diagnostic service
- remediation program for severely disabled readers
- enrichment program for fifth- and sixth-grade pupils with average or above average I.Q.
- teacher-training program for classroom teachers who plan to teach remedial reading
- orientation program in the purposes and programs of the clinic for school principals, district top-level staff, school nurses, psychometrists
- research center to serve district needs in exploring and evaluating new and experimental methods of teaching reading

The clinic is housed in a 60 by 160 foot structure composed of six modular inter-connected units. The complex is air-conditioned, self-contained, and expandable. Opened in June, 1966, the clinic began as a summer program with 60 pupils. The staff includes a director, two clinicians, and a part-time secretary, serving about 75 pupils at a time. During the year the maximum case load ranges from 250 to 300 pupils who come for 45 minutes a day. Two weeks are given over to diagnosis followed by six weeks or longer of remediation before the child is sent back to his regular classroom with a "prescription" for his teacher to follow.

The Rewards of a Clinic Program

These few brief descriptions by no means cover all clinical programs. There are many such programs ongoing today as part of the attack on serious reading disability. It is probably safe to say that there is more ferment, experimentation, and progress in the field of reading disability than in any other aspect of education today.

Administrators who have instigated clinical programs and educators who are a part of them are enthuiastic about the promise they hold. "We now have an increased awareness of the causes of reading failures and of approaches to use in overcoming them," said one. Not only are the clinics helping individual pupils to overcome their reading difficulties, but reading success has improved pupil attendance and reduced deliquency among pupils who were formerly poor readers or nonreaders. "Even the bus trip to the clinic is important," said one teacher whose disadvantaged students have rarely traveled more than a few blocks from their homes. Educators also note more support of school efforts on the part of parents whose children are now being helped by highly specialized personnel.

Despite the problems of finding space, staff, and money, school administrators who have undertaken to set up clinic programs say the effort is well spent.

CHAPTER III CONSIDERATIONS FOR THE ADMINISTRATOR IN SETTING UP A CLINIC PROGRAM -- An Assessment of the Possibilities

The main responsibility in determining the need for a diagnostic clinic and in establishing a remedial program for children with severe reading disabilities rests with the superintendent of schools and other top-level administrators. This is true because the clinic involves many schools and a major financial commitment.

While it is estimated that one to five percent of the children in any school population (Strang, 1968, p. 2) will have learning difficulties serious enough to warrant clinical treatment, it may be that a small school system will not have a sufficient number of pupils with severe reading disabilities to justify the cost. In that case, it may be possible for several small school districts to join forces to survey the need and establish a clinic. Similarly, a public school system could join the private and parochial schools in the area to establish one.

A clinic is expensive because treatment of severe reading problems often requires a one-to-one relationship with the child or, at best, one teacher for every three or four children. Furthermore, the services either must be taken to the child or the child must be brought to the clinic. The materials involved are also expensive. Per-pupil cost, however, is not the only consideration. The shortage of qualified personnel also makes staffing a difficult problem.

But clinics can more than justify their cost by providing teacher training and consultative services, as well as diagnostic and remediation services, to the schools. Their effect can ripple through an entire school system, raising the standards of all.

Selection of the Children

Not every poor reader needs clinical treatment; not every child can benefit (Kolson and Kaluger, 1963, p. 16). Although a line must be drawn somewhere, the first rule to follow is, "be flexible." Experience has shown that the border-line between moderate and severe reading disabilities is sometimes difficult to ascertain and that a recommendation for nonclinical remediation should not be final.

Guidelines must be set, both for those children diagnosed by the clinics and for those treated by the clinics, but they should be used with discretion. For example, intelligence tests are not necessarily reliable guides. A rigid cutoff point based on I.Q. tests is questionable (Bond and Tinker, 1967, p. 13). I.Q. scores vary, depending on the test used, and are too often based on reading ability reflecting merely the frustration level rather than the actual ability of a student with a severe reading disability. Moreover, the clinic program can actually raise a child's I.Q. score (Bond and Tinker, 1967, p. 413), and a rise of even a scant five points can mean the difference between a frustrated life and a useful one if a rigid I.Q. cutoff is maintained. It is noteworthy, however, that a slow learner must have the instructional pace and techniques adapted to his slow learning ability. The best diagnostic services attempt to discover learning potential from tests not based entirely on ability to read, such as the Wechsler Intelligence Scale for Children.

It is worth noting, in addition, that some school systems have found that even the "educable mentally retarded" profit from being included in clinic programs.

Another criterion that should be evaluted with caution is reading lag or gap, the difference between potential and performance. If the critical lag is set at two years for everyone, then no clinical program could start before third grade, which many agree is already too late. Most experts agree that it is as serious to be behind six months in the second grade as two years in the eighth. DeKalb County, Georgia, for example, uses a staggered measure, beginning with a five-month lag in first grade and rising to two years by the sixth. Children who are two or more years behind are not necessarily children with severe reading disabilities, but the lag criterion provides an initial, rough screen measure. Increasingly, the focus is coming to rest on younger and younger children. The earlier the problems are identified, the better.

Once standards are set for acceptance of children by the clinic, who should make the referral? Frequently, the classroom teacher does, since he is in the best position to spot problem readers. Usually his referral must come through the principal. If there is a remedial reading teacher or a reading consultant in the school, of course, they help determine whether a child should be referred. Referrals from either a reading specialist in the school or the principal are usual patterns. Ordinarily it is also the school's responsibility to inform the parents and prepare them for interviews at the clinic.

Once the diagnostic testing is completed, the clinic must recommend the appropriate treatment. Reading treatment programs are usually divided into three categories: 1) corrective (in class), 2) remedial (special teacher), and 3) clinical. If the reading disability is not too serious or the course prescribed too complex, the clinic may return the child to the school. For example, the clinic may return to the classroom a disabled reader who is performing close to his capacity level with suggestions for appropriate materials and techniques. In another case, the clinic may suggest corrective treatment, either by the classroom teacher or a reading teacher in a remedial reading class. If a child's disabilities are severe, however, and the treatment complicated, he will be taken into the clinic for treatment.

Unfortunately, many children with severe reading difficulties will be found to have conomitant problems, some of which preceded and possibly

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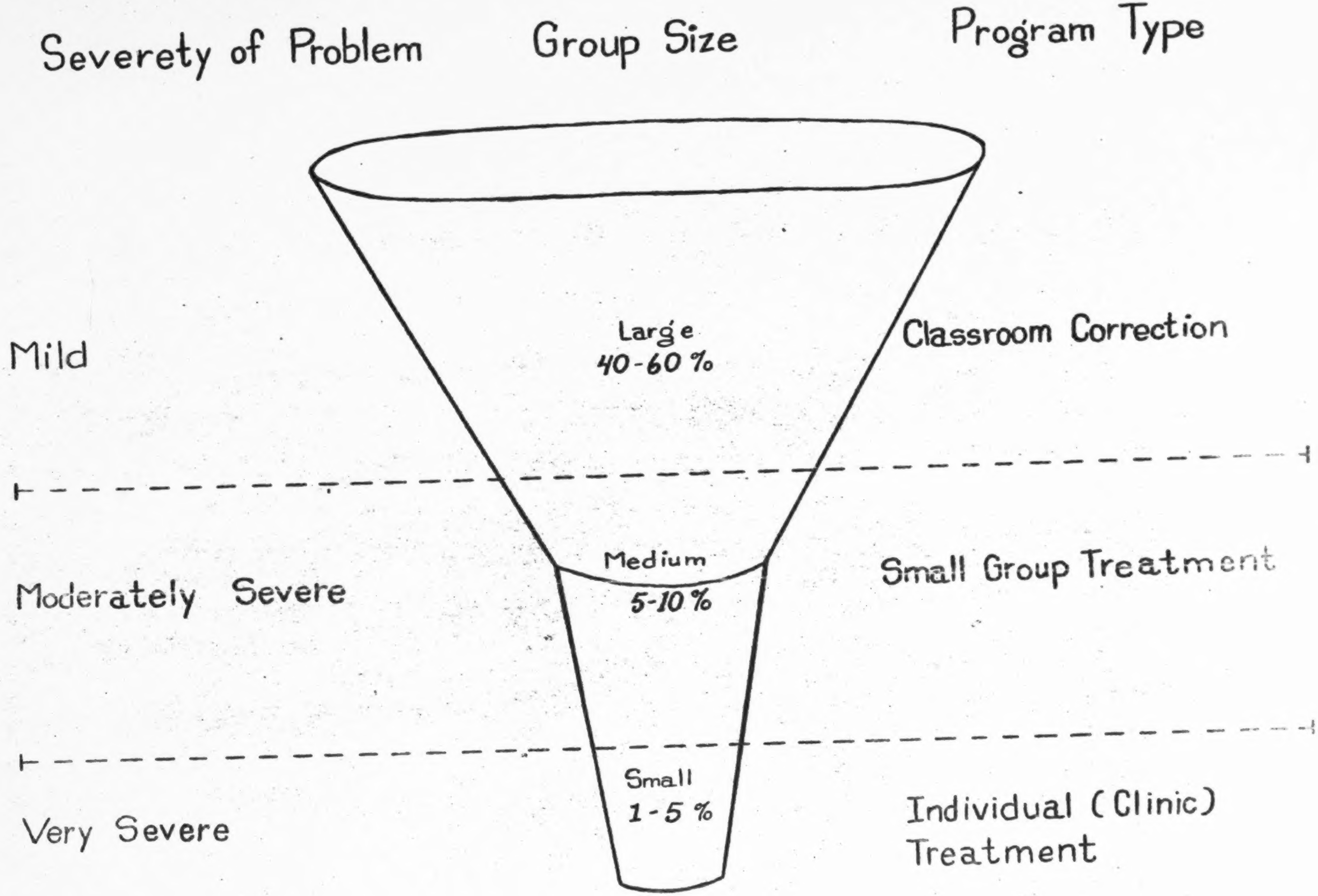

Severety of Problem
Group Size
Program Type
Mild
Large
40-60 %
Classroom Correction
Moderately Severe
Medium
5-10 %
Small Group Treatment
Very Severe
Small
1-5 %
Individual (Clinic) Treatment

contributed to or perhaps stemmed from, the reading disability (Strang, 1968, p. 63). Children with severe emotional disturbances may not be able to benefit from clinical help because their emotional problems interfere with the treatment. The clinic must decide whwther they need medical help before treatment can begin or outside help along with the clinic program.

Testing

There are probably no two severe reading disability cases exactly alike; hence, flexibility in testing procedures is a prerequisite for an effective program. Not every child will require every test and not every test is of equal value.

In general, the diagnosis should include not only reading tests, but also tests of the student's general achievement, his achievement potential, his vision, hearing, speech, personality, and attitudes.

Though the school administrator cannot ordinarily be an expert in diagnosis and testing, he should be aware of some of the limitations of tests. Some tests overestimate the ability of the child and some underestimate it. Some are valid for small children but lose their validity for children in higher grades. An obvious advantage of clinical testing is the use of a cross-discipline interpretation of the tests.

The recommended multidisciplinary approach calls for the services of a variety of persons--social workers, speech therapists, and psychologists, as well as reading experts. Teamwork is essential if their services are to be helpful in planning remedial treatment for individual cases. For example, a diagnosis of "emotional interference" with learning to read does little to indicate techniques that can help a child learn to read. The social worker can offer direction and make visits to the home; the psychologist can recommend a motivational strategy; and the reading clinician can map out a plan for reading skills.

An experienced diagnostician, one who has clinical experience and can exercise discrimination in the administration of tests, must be in charge of testing program and test interpretation. Test results easily lend themselves to misinterpretation, and highly qualified people are required to evaluate them. Testing usually shows strengths as well as weaknesses, enabling the evaluator to prescribe a program that builds on the child's strengths to overcome his weaknesses.

A diagnostic battery of tests requires three to five hours of clinic time, and an interview with the parents usually takes place while the first tests are given. The clinician needs the family background information which the parents can supply, and he, in turn, can give them a better understanding of the purpose of the tests. A followup interview is held to discuss the results, and, although such work with parents may be time consuming at the beginning, it enlists their cooperation in the program early. On their cooperation may hang success or failure.

The child's classroom teacher should also be informed of the test results, even when the clinic undertakes the remediation itself. Since most classroom teachers are unfamiliar with individual diagnostic tests and unable to evaluate their results, it is essential to explain the results so the teacher can relate the child's learning abilities and disabilities to the classroom situation.

Clinical testing for severe reading disabilities usually takes place in a central location where the equipment, materials, and clinicians are available. However, more and more school systems are making use of mobile vans to take the diagnostic equipment and clinicians to the schools, particularly in county school systems where schools are widely scattered. Typical equipment would include an audiometer for hearing screening, an instrument for vision screening, instruments for checking visual-motor coordination, psychological test kits for intelligence and personality evaluation, general academic achievement tests, and diagnostic reading tests for various levels. Expenditures for one set of these materials and equipment may total $2,000.

Staffing and Training

The greatest problem in all remedial reading programs is the shortage of trained specialists. New York City, for example, has only one reading-language specialist for approximately every ten schools. The shortage of clinicians who deal with the severe reading disabilities is particularly acute.

Not only are reading specialists needed, or a clinic staff, but also psychologists, social workers, and other specialists. As was noted earlier, these specialists must be oriented to reading problems so that their recommendations can be related to the remedial program planned for a child in the clinic or in his home school.

The type of staff and the numbers needed will, of course, depend on the kind of program undertaken and the numbers of children involved. For instance, if children for a clinical program are drawn entirely from the slums of a city, a social worker experienced in dealing with environmental factors would be desirable.

One example is the staff of the Columbus, Georgia, clinic program, serving both parochial and public schools of Muscogee County, has, in addition to the director of the program, five specialist examiners, nine remedial teachers, four secretaries, one part-time typist (a junior high school student), four bus drivers, and one part-time maid. Some 150 students arrive at the clinic every hour, brought by buses which operate eight hours a day, five days a week.

The staff at Albany, Georgia, to give another example, numbers thirty, and in addition to remedial teachers, includes the director, four clinicians, two assistant clinicians, two social workers, two part-time psychologists, a speech therapist, and a bus driver.

The increasing development of the numbers of school clinics makes it difficult for colleges and universities to train sufficient staff members to meet the demand. As a result, many clinics find that they must undertake their own training program in order to give the children the really individualized instruction they need. In addition to clinic teachers, some clinics add training for classroom and nonclinic remedial teachers as well. It has been found that inexperienced remedial teachers tend to rely too heavily on a reading kit or on traditional classroom formats, thus precluding a problem-oriented individual approach. Some even resort to developmental program techniques and materials. Clinics with in-service training programs remind the new clinic teacher to focus on the learning problems of the individual child.

The length and purpose of a training program varies from clinic to clinic. Graduate study in Temple University's program takes a year or longer; the in-service training program in Albany, Georgia, requires six months; and that in DeKalb County, Georgia, lasts nine weeks. The first awards masters' degrees to clinicians, the second is for classroom teachers, and the third for remedial reading teachers.

Clinic staffs frequently conduct in-service sessions for classroom teachers, explaining procedures of the clinic and demonstrating materials and methods used. Far too often, however, knowledge of the clinic program fails to reach the classroom teacher, who knows only that the child disappears for an hour each day. Obviously, without classroom cooperation and reinforcement of clinical techniques, the child's progress in learning to read may be inhibited, if not completely deterred.

Teachers given an opportunity to observe and understand the clinic program operation are intrigued. "I didn't realize so many problems existed causing reading difficulties existed," said one. "I'm learning something new every day about materials and equipment," said another.

Meetings between the clinic staff and the teacher can be an important factor in providing a rounded program for a child. Unless the participants are clear as to what they are expected to contribute to the discussion of a case, however, such meetings can be vague and a waste of time.

The shortage of reading specialists is leading to innovate methods of staffing. In Arkansas, the State University's medical school has trained 100 members of the Federated Women's Club to administer diagnostic tests, which are then scored and interpreted by staff psychologists. More than 6,000 children have been evaluated this way. The University now plans to train the same group of women to become reading tutors, for work in homes as well as schools. With adequate training, supportive personnel can perform many of the routine tasks in a clinical operation.

Services

Some clinics attempt only the diagnosis procedure, later referring the child, with prescriptive measures, either to other agencies, to the remedial program of the child's school, or to his own classroom. Diagnosis without treatment does little for the child. Once the diagnosis of a reading problem has been made, the child should be provided with appropriate treatment.

Most clinics do offer treatment based on the diagnosis. Individually prescribed clinical treatment is aimed at specific learning disabilities. A number of techniques--visual, auditory, kinesthetic, tactile--may be employed. A child with problems in visual-motor coordination, for example, may engage in a series of exercises, such as making believe he is a puppet or a jack-in-the-box, skipping, hopping, and puddle jumping, and tracing forms with his finger or with a pencil.

A child who has failed to understand the relationship between speech and print may be asked to dictate his own experience stories to the teacher, then learn to read them back from a typewritten copy. A clinic, however, will not only teach a child the skills to advance his reading and learning ability, but will also try to improve his attitude toward himself and his reading. A wide selection of materials must be available to stimulate reading interest.

As with diagnostic techniques, it is not essential for the school administrator to be an expert on all of the many effective materials and methods. That is the function of the clinic director. However, it is only reasonable to expect the superintendent to be informed of the general approaches used in his clinic and to encourage evaluation of specific techniques so that he is able to effectively modify if modifications are needed.

Just as there are wide variations in materials and methods used, so are there diversities in the amount of time spent by the children in the clinics. Good results have been achieved with a child attending the clinic three times a week. One study showed no significant differences between effects of remedial assistance offered once a week and that offered daily. What is probably the key is the consistency of practice on a skill, whether in the clinic, the school or the homeroom. Many agree that the task of scheduling is a "headache" but can be worked out with the schools. In some programs, the children attend the clinic all day for several weeks before returning to their regular classrooms. The length of time a child stays in the clinic program, of course, should depend on the extent of his disability and on his response to treatment.

An important part of the service offered by any clinic is the follow-up on the child's progress after clinical treatment and the follow-up on those with less severe reading problems after their referral to their schools. Far too often, no followup is provided for, and also far too often, it occurs only on paper. Yet the followup is one of the most important aspects of the work of an effective clinic. The directors of the Philadelphia Public School Clinic feel that their followup on diagnosed cases creates a significant impact on the progress.

Cost

The cost of establishing a clinic varies with the program. It depends on the number of children to be served and the kinds of services the clinic sets out to perform.

Correcting severe reading disabilities is an expensive operation and becomes more expensive in direct ratio to the seriousness of the problems. Equipment alone costs a great deal. Audiometers, telebinoculars, and other equipment, for example, create high initial expenses, although they are nonrecurring expenses. Training materials also are expensive for those clinics attempting to carry on truly individualized programs. Average textbook expenditures for elementary pupils is only $8 annually, but costs for clinical materials is considerably more.

The most expensive element in the clinic operation is, of course, the staff. Instead of the classroom ratio of one teacher for twenty-five or thirty children, the clinic ratio is often one teacher for six or eight pupils. A teacher working on a one-to-one basis can see only six or seven students a day if she is to have any time for reports.

Because of the variation in types of clinics and the services they offer, it is impossible to place a price tag on clinic costs or even to offer a range of costs. The following examples, however, may serve to give the administrator some idea of costs involved.

DeKalb County, Georgia, started its county-wide program with a $400,000 grant setting satellite clinics in Title I schools which receive $3,000 for remedial materials. The clinic at Albany, Georgia, spends $300,000 of a $500,000 Title I grant for its reading materials and salaries.

Broward County, Florida, has budgeted $108,135 for its mobile clinic project. The costs are broken down as follows:

$33,000 for five trailers and one tractor

4,500 for tractor driver, gas and oil

1,250 for custodial services

2,000 for utility hookup

16,960 for equipment

31,375 for instruction (staff and materials)

19,050 for administration

Neighboring Palm Beach County has a mobile program budgeted at $72,705. Its costs break down as follows:

$23,466 for three mobile reading centers and furniture

34,650 for salaries for one clinician, four reading teachers, and one secretary -- 2 in each van.

7,890 for reading equipment

6,698 for reading materials and books

Table X gives additional information on representative costs of clinics across the country.

INSERT TABLE X COSTS OF CLINICS ACROSS COUNTRY

COST OF SPECIAL READING PROGRAMS

City	Description	Cost	Contact
Cedar Falls, Iowa	Clinic and library with staff of 6 in an elementary school serves intermediate grade children with reading difficulties. Includes satellite reading centers and busing of children.	$206 per pupil for 200 pupils	Grace Leinen
Clarkston, Georgia	36 satellite clinics housed in existing school buildings, each staffed by one teacher.	1st year: $195,000 2nd year: $319,000	Estelle Howington DeKalb Schools Reading Center 955 N. Indian Creek Dr. Clarkston, Georgia 30021
Downey, California	Traveling reading unit (trailer) provides diagnostic services to non-public schools. Includes substitute teacher.	$18,547 $252 per pupil for 72 pupils	Arthur Emerson, Coordinator Downey Unified School Dist. 11627 Brookshire Ave. Downey, California
Robbinsdale, Minn.	Special classes for the retarded resource teachers for visually handicapped; home and hospital tutoring; speech and language therapy; psychological and psychiatric services; social work services; educational consultive services.	$144,373 $540 per pupil for 235 pupils	Tracy F. Tyler, Jr. Director, Learning Centers Independent School District 281 Robbinsdale, Minnesota
St. Louis, Missouri	Reading clinic designed to treat children with reading difficulties and to train teachers in the materials and techniques of teaching reading.	$240,000	Walter A. Kapp Director of Special Ed. Board of Education 1616 South Grand Blvd. St. Louis, Missouri
West Palm Beach, Fla.	Clinician and 4 teachers provide diagnosis and instruction for 6 class periods per day for 226 days in 4 mobile reading clinics	$53,460 - yearly cost of operation for each trailer	John L. Spagnoli Director of Reading Board of Public Instruction 6th Street North West Palm Beach, Fla.

The buildings used for clinics vary from a remodeled corner of a school in Cedar Falls, Iowa, to an abandoned beauty school in Philadelphia, a courthouse in Appleton, Wisconsin, a warehouse in Bay City, Michigan, a former hosiery mill in Albany, Georgia, and an unused school building in Buffalo, New York. Almost any kind of a structure can be adapted, but the remodeling should emphasize creating a cheerful, well-lighted, quiet atmosphere, a place conducive to learning. The machinery and equipment are usually clustered, and often another space is allocated to a library and reading room. Carrels, which provide the child an opportunity to be alone and work quietly are important. The teachers' offices, if large enough, can double as instruction rooms with the addition of a table and a few chairs. Small-group instruction rooms occupy the remaining space.

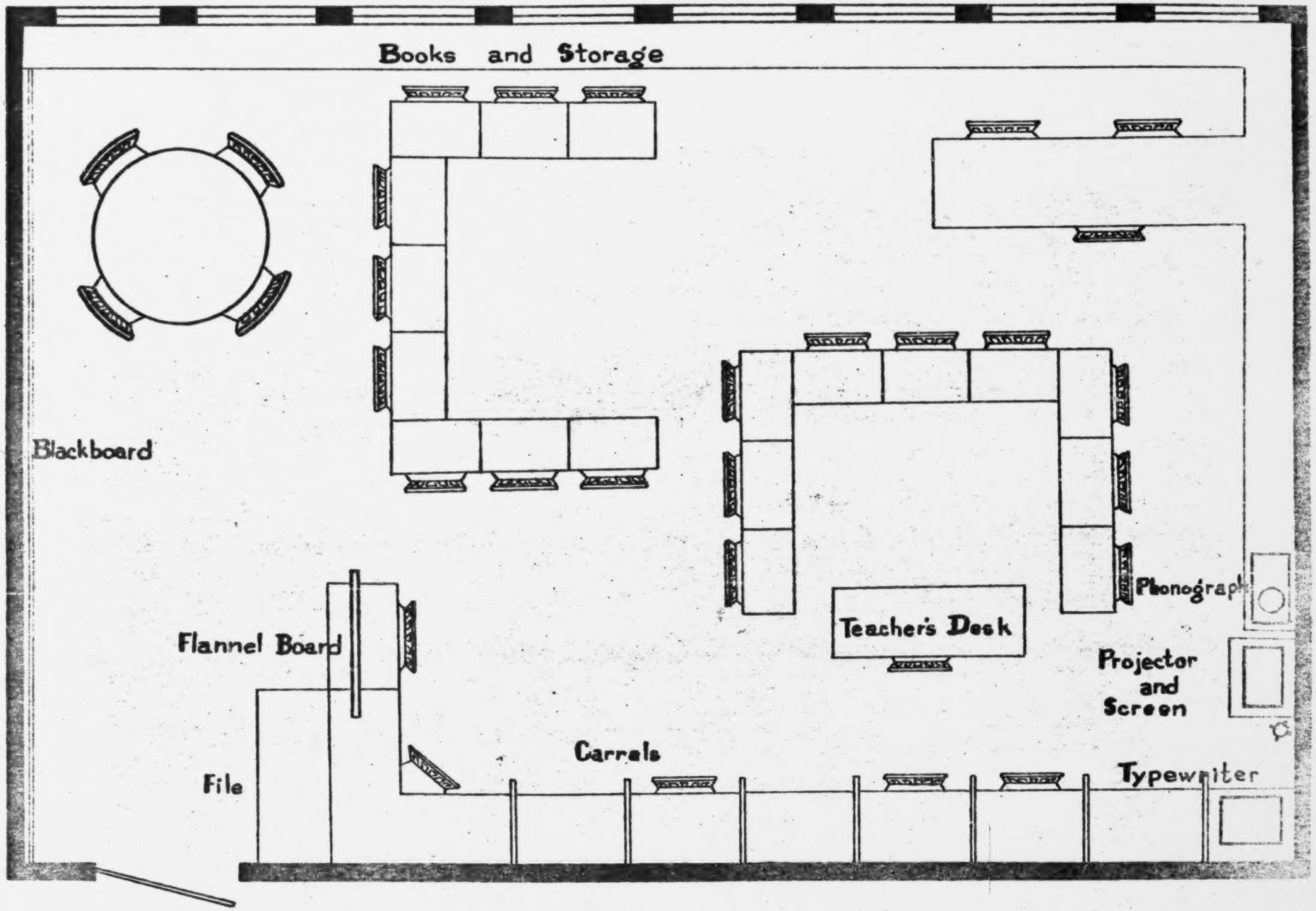
INSERT PHOTO OF CHARM SCHOOL

INSERT BUILDING DIAGRAMS

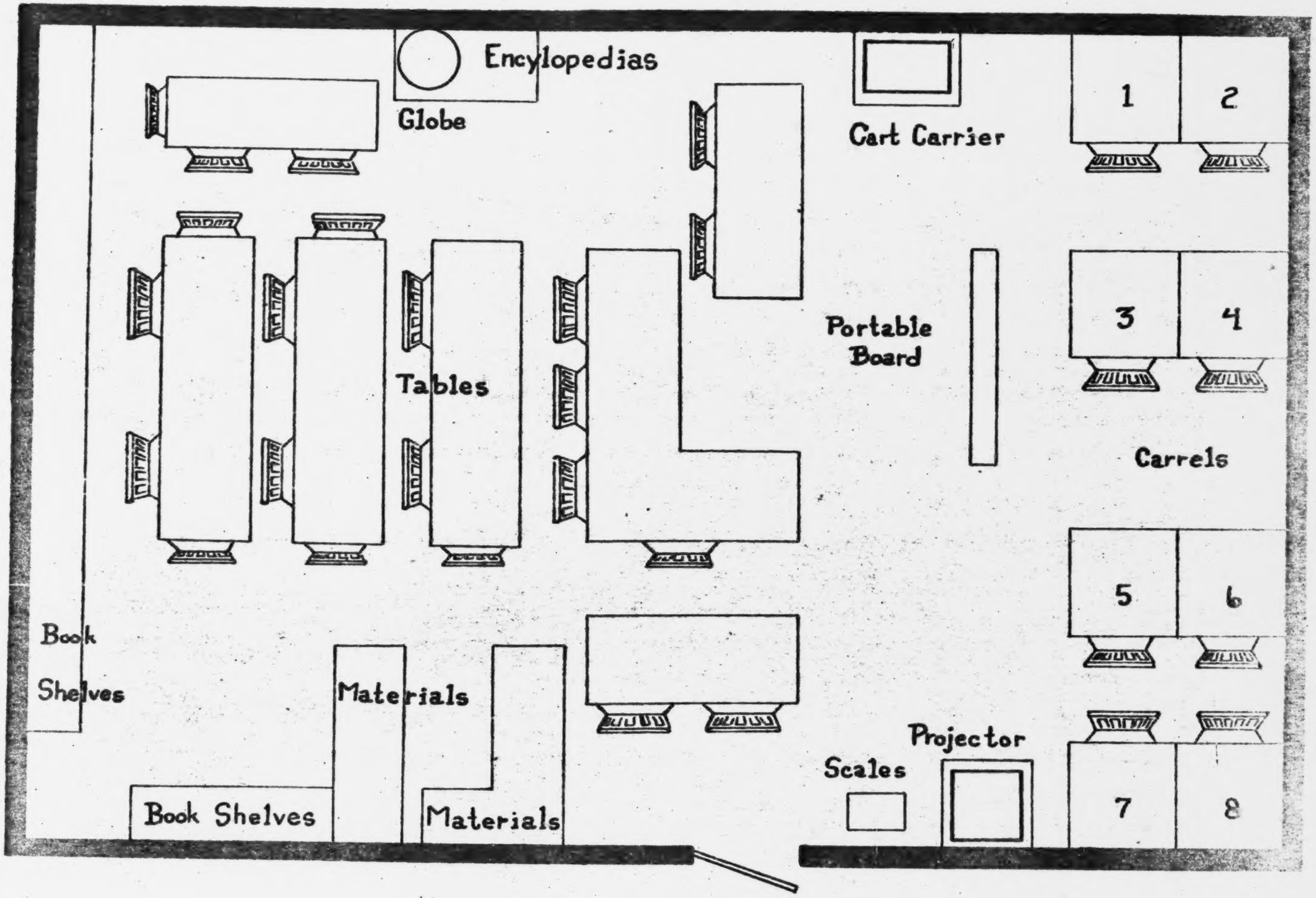
Coordination

Usually the most difficult part of a clinical program is making sure that its activities are coordinated with those of the regular school program. This matter cannot be left to chance. A central office administrator must take the chief responsibility for seeing that coordination is planned for and actually achieved.

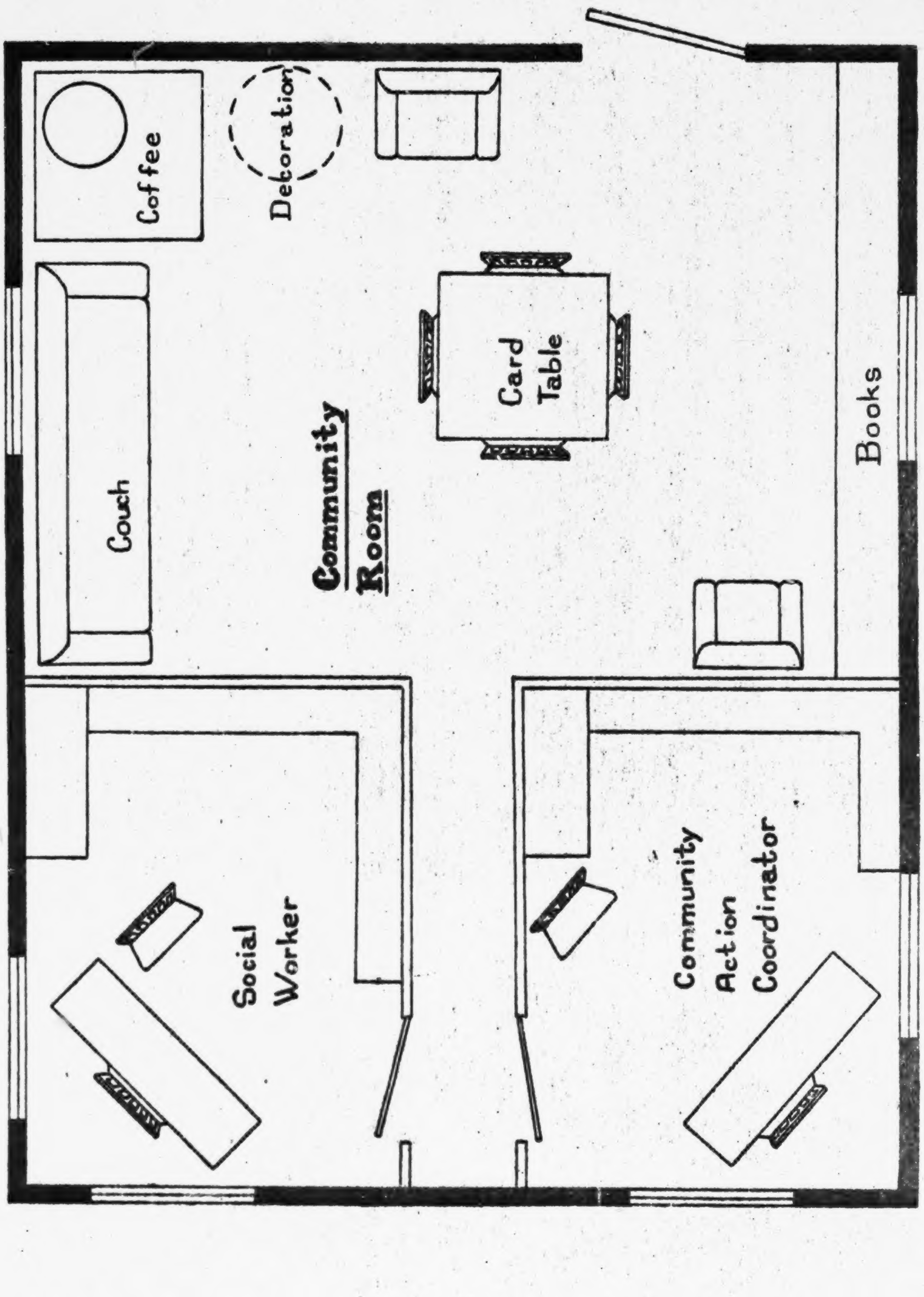
Problems of coordination come from all sides. Principals are occasionally relectant to release classroom teachers for orientation or training at the clinics. But unless teachers--not only the classroom teachers but the entire staff--understand the importance of the clinical program, they may be reluctant to release the children from their classes to attend clinical sessions. The children themselves may be reluctant to go to the clinic


Books and Storage
Blackboard
Flannel Board
File
Carrels
Teacher's Desk
Phonograph
Projector and Screen
Typewriter

Classroom Grouping


Encylopedias
Globe
Cart Carrier
1
2
Portable Board
3
4
Tables
Carrels
5
6
Book Shelves
Materials
Projector
Scales
Book Shelves
Materials
7
8

School Clinic Learning Center


Coffee
Decoration
Couch
Community Room
Card Table
Books
Social Worker
Community Action Coordinator

RELATING TO THE BODY OF MATERIAL BETWEEN THE PHOTO OF THE CHARM SCHOOL AND THE BUILDING DIAGRAMS SHOULD BE INSERTED PHOTO # 13 and #12 IN THAT ORDER.

if their appointments are scheduled at a time which interrupts enjoyable periods of the school day. For instance, a child who likes art should not be asked to forego his art class in order to go to the clinic if it is feasible to arrange otherwise. Physical education classes may be important for children with perceptual difficulties and, if possible, should not be missed. If it is convenient, the child's clinic appointment should coincide with his regularly scheduled period for reading.

Coordination between clinic staff and classroom reading teachers is especially vital to the child's improvement. If the clinic staff recommends new material with which the classroom teacher is unfamiliar, he should ask for a demonstration of its use. If the clinic recommends a classroom program for the child, it should be sure the program can actually be carried out in a classroom and that the teacher understands it. Classroom teachers who have students assigned to the clinic may feel this somehow reflects on their ability. They, too have to be led to understand how reading disability may occur and how the programs of the clinic may overcome such disability. Furthermore, familiarity with the clinic program aids classroom teachers to accomplish more effective individualized teaching and to better recognize existing reading problems. The greatest hope of schools for preventing more cases of severe reading disability lies with the classroom teacher. Understanding the clinic program helps elementary teachers particularly in spotting severe disabilities earlier. This is important because the earlier the detection, the greater chance for a cure.

A Final Word

Until fairly recently, the opportunity for correction of severe reading disabilities was available only to the wealthy or fortunate. However, even if one could afford treatment, the clinics, the personnel, the methods, materials, and techniques were scarce.

Today, with increased emphasis on the importance of reading and with increased financial assistance available for experimentation, the benefits of clinical treatment are being extended to many children. The supply of materials, developed from demonstration centers, from teacher-directed projects,and from textbooks, equipment, and games publishers, has multiplied greatly in recent years. Techniques are continually being modified and perfected as research and experience combine to prove which hypotheses are valid. A tremendous amount of knowledge concerning severe reading disabilities and how to overcome them has been amassed in the past ten years.

However, the programs are still expensive -- a real problem for every top-level school administrator who is already pressed for funds. Trained staff members for the programs , in the numbers needed, do not yet exist. Crowded school systems, often needing more space for normal school activities, now must find space for clinical services.

Yet the only hope for most children with severe reading disabilities lies in school-connected clinics. Furthermore, the only hope for widespread early detection rests with the pioneer work in diagnostic teaching which the clinics can encourage. Administrators with vision and a sense of responsibility for the children of today and those of tomorrow will find a way to make clinical services available.

Steps for Setting Up a Clinic

Steps to take in setting up a clinic. Discussion of these steps can be found in the text of this book.

1. Establish an advisory committee. (Administrators, teachers, supervisors, and consultants).
2. Survey need for clinic in school district. (1-5%).
3. Determine financial commitment to clinic operation. (See table-- for costs of several operating clinics.)
4. Select a clinic director who will assist in hiring the personnel.
5. Identify facility in which clinic will operate.
6. Recruit personnel to staff clinic.
7. Establish guidelines for referring students to the clinic.
8. Establish guidelines for transportation and scheduling.
9. Provide school-wide in-service education to explain operation of reading clinic.
10. Provide for in-service training for clinic staff.
11. Provide for an adequate supply of materials and equipment. (See chart of clinic costs).
12. Establish guidelines for follow-up on all clinic cases.
13. Provide at least two months lead time for clinic staff to work out testing procedures, forms and general operating procedures.

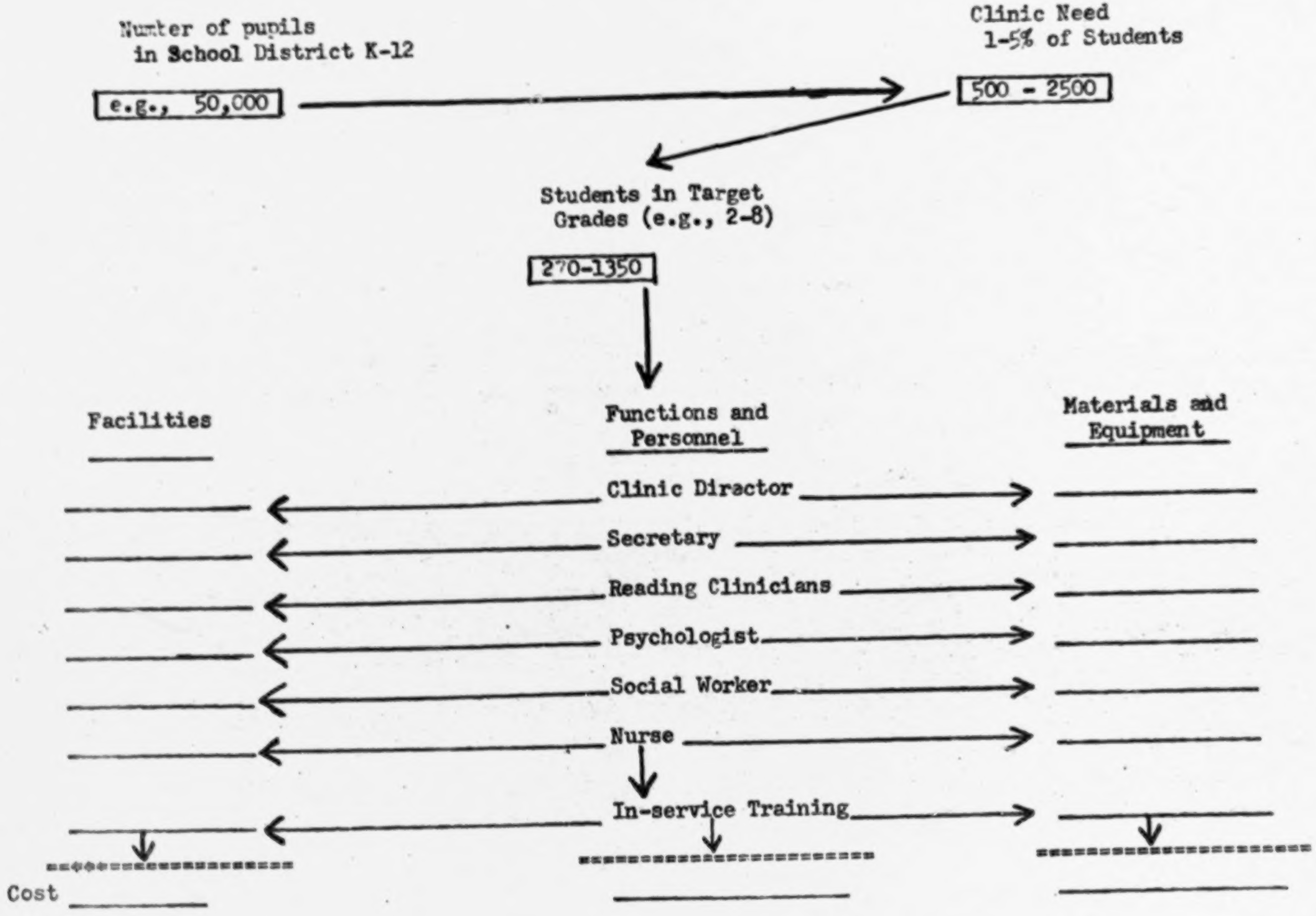
A Checklist for Action

Before attempting to fund a clinic, the administrator should consider all the factors that will have an influence on its ultimate operation. A number of primary considerations are listed here, and others which apply to any special set of circumstances should be added.

Preliminary Policy Considerations

1. Will the clinic serve a single school, a single system, or an entire area? If an area, will both public and private schools use its services?
2. How many functions will the clinic fulfill--diagnosis, treatment, recommendations for remedial help in classroom, referrals to treatment centers, or all of these?
3. What staffing will be necessary to provide stability in the following areas?
    - testing
    - corrective treatment
    - parental guidance
    - clinic-teacher coordination
4. What members of the present staff could function in a clinic with a few additional university hours or other special training?
5. What criteria will be used to determine which students need clinical diagnosis?
6. What criteria will be used to establish a necessity for clinical rather than classroom treatment?

ADMINISTRATORS PLANNING SHEET FOR ESTABLISHING A READING CLINIC


Number of pupils in School District K-12
e.g., 50,000
Clinic Need 1-5% of Students
500 - 2500
Students in Target Grades (e.g., 2-8)
270-1350
Facilities
Functions and Personnel
Materials and Equipment
Clinic Director
Secretary
Reading Clinicians
Psychologist
Social Worker
Nurse
In-service Training
Cost

APPENDIX A

Sample Book List for Reading Clinic

The Dougherty County Clinic has a list of materials that is used in their clinic. That list might be of help in setting up a clinic.

Title	Publisher	Gr. Lev.	Rdg. Lev.
Adult Basic Education Books	Steck-Vaughn	beg.-adult	1-12
Building Reading Power	Chas. E. Merrill	5th	[illegible]
Building Reading Skills	McCormick-Mathers	1-6	1-6
Computational Skills Dev. Kit	Science Research		6-9
Cyclo-Teacher	Field Enterprises Educ. Corp.		Tchg. machine
Deep Sea Adventure Series	Harr Wagner	3-10	2-6
EDL Skills Library	Educational Dev. Lab.		3-9
EDL Word Clues	Educational Dev. Lab.		7-13
First Adventures in Learning Program	Associated Ed. Services Corp.		
Gates-Peardon Practice Exercises in Reading	Bureau of Publications, Columbia		2-6
Invitations to Personal Reading	Scott, Foresman		1-6
I Want to Be Books	Children's Press	k-3	1
Jim Forest Readers	Harr Wagner	1-6	2-4
Kaleidoscope of Skills: Reading	SRA		5-7
Learnings in Science II	SRA	4-6	
Lessons for Self Instruction in Basic Skills (Reading)	California Test Bureau		3-9
Literature Sampler	Encyclopedia Britannica	4-6	
Little Owl Series	Holt, Rinehart, Winston		k-2
Young Owl Series	Holt, Rinehart, Winston		2-4
Wise Owl Series	Holt, Rinehart, Winston		4-6
McCall-Crabbs Stand Test Lessons in Reading	Bureau of Publications, Columbia		2-12

Title	Publisher	Gr. level	Rdg. level
Morgan Bay Mystery Series	Harr Wagner	4-10	2-4
New Practice Readers	Webster-McGraw-Hill		2-8
Pilot Libraries	SRA		4-8
Programmed Reading	Webster-McGraw-Hill		pp-4
Reader's Digest Adult Readers	Readers Digest Ed. Service, Inc.		1-3
Reading Essentials Series	Steck-Vaughn Co.		1-8
Reading Spectrum	Macmillan		4-6
SRA Reading Laboratories	SRA		read-col.
Spelling Word Power Lab	SRA	4-7	[illegible]
Sullivan Reading Program	Behavioral Research Lab		pp-4
Torchbearer Library	Harper-Row		

APPENDIX B

University Reading Clinics That Treat Severe Reading Disabilities

Auburn University
School of Education
Reading Clinic
Auburn, Alabama
Director: Dr. Gary D. Spencer

University of Alabama Medical Center
Department of Pediatrics
Clinic for Developmental and
Learning Disorders
1919 Seventh Avenue, South
Birmingham, Alabama
Director: Dr. John W. Benton, Jr.

Arizona State University
College of Education
Department of Elementary Education
Reading Center
Tempe, Arizona 85281
Director: Dr. N. J. Silvaroli

Northern Arizona University
Department of Special Education
Flagstaff, Arizona
Director: M. G. Beals

University of Arizona
College of Education
Reading Service Center
Tucson, Arizona 85721
Director: Dr. George Becker

University of Arizona
Department of Psychology
Psychological Clinic
Tucson, Arizona
Acting Director:
William L. Simmons, Ph.D.

University of Arkansas
Department of Psychiatry
Division of Child Psychiatry
Medical Center
Little Rock, Arkansas
Director: John E. Peters, M.D.

California State College at Long Beach
Educational Psychology Clinic
Long Beach, California 90804
Acting Director: Dr. L. Stacker

California State College at Los Angeles
Department of Associated Clinics
5151 State College Drive
Los Angeles, California
Director: Richard G. Cannicott

California State College at L. A.
Department of Psychology and
Special Education
Learning and Behavior Problems Project
Los Angeles, California 90032
Director: Alice Thompson, Ph.D.

San Diego State College
Clinical Training Center
5402 College Avenue
San Diego, California
Director: Ramon Ross

San Francisco State College
School of Education
Learning Clinic
1600 Holloway Avenue
San Francisco, California
Director: Dr. Louis H. Falik

Stanford University
School of Medicine
Dep't. of Speech Pathology and
Audiology
Institute for Childhood Asphasias
1691 El Camino Road
Palo Alto, California
Director: Jon Eisenson

University of California
Psychology Clinic School
405 Hilgard Avenue
Los Angeles, California 90024
Assistant Director: Howard Adelman, Ph.D

Whittier College
Department of Education
Reading Clinic
13425 E. Philadelphia
Whittier, California 90608
Director: Lola B. Hoffman

Colorado State University
Department of Hearing and Speech
Service
Speech and Hearing Clinic
Fort Collins, Colorado

University of Colorado
Speech and Hearing Clinic
934 Broadway
Boulder, Colorado
Director: Ned W. Bowler

University of Denver
Dep't. of Speech Pathology and Audiology
Speech and Hearing Center
University Park Campus
Denver, Colorado 80210
Director: Jerome G. Alpiner, Ph.D

Western State College
Department of Education
Gunnison, Colorado 81230
Director: Kenneth R. Parsons

University of Delaware
Department of Education
Reading Study Center
Newark, Delaware
Director: Russell G. Steuffer

University of Florida
College of Education
Personnel Services Department
Children's Learning Center
Gainesville, Florida
Director: G. S. Hasterok

University of Florida
Department of Comprehensive English
Reading Laboratory and Clinic
310 Anderson Hall
Gainesville, Florida
Director: George Spache, Ph.D.

University of Miami
Department of Special Education
Child Development Center
Coral Gables, Florida 33124
Director: DeForest L. Strunk, Ed.D.

Emory University
Division of Teacher Education
Atlanta Speech School
2020 Peachtree Road, N.W.
Atlanta, Georgia 30309
Director: Robert L. McCroskey, Ph.D.

Idaho State University
College of Education
Pocatollo, Idaho

Bradley University
School of Speech Therapy
Peoria, Illinois 61606

Loyola University Guidance Center
820 N. Michigan Avenue
Chicago, Illinois
Director: T. M. Kennedy, Ph.D.

Northwestern University
Department of Communicative Disorders
1831 Harrison
Evanston, Illinois
Director: David Rutherford

University of Chicago
Department of Education
Speech and Language Clinic
950 E. 59th Street
Chicago, Illinois 60637
Director: Joseph M. Wepman, Ph.D.

University of Illinois--Medical Center
Center for Handicapped Children
840 S. Wood Street
Chicago, Illinois 60612
Director: Edward F. Lis, M.D.
Clinic Coordinator: Henrietta Schatland

Indiana State University
Department of Special Education
Speech and Hearing Clinic
Terre Haute, Indiana 47809

Indiana University Medical Center
Deparment of Pediatric Neurology
1100 W. Michigan
Indianapolis, Indiana
Director: Arthur L. Dren, M.D.

Iowa College of Education
Children's Reading Clinic
Iowa City, Iowa 52240
Director: Siegmar Muehl

State College of Iowa
Educational Clinic
Speech Clinic
Cedar Falls, Iowa 50613
Educational Director: Dr. Ralph Scott
Speech Clinical Director: Dr. Roy Eblen

Fort Hays Kansas State College
Division of Education and Psychology
Psychological Service Center
Hays, Kansas 67601
Director: John D. King
Division Director: Dr. Calvin Hargin

University of Kansas
Department of Psychology
Psychological Clinics
307 Fraser Hall
Lawrence, Kansas 66044
Director: M. Erik Wright, M.D.

University of Kansas Medical Center
Children's Rehabilitation Unit
Rainbow at 39th Street
Kansas City, Kansas
Director: Herbert C. Miller, M.D.

Morehead State University
Department of Psychology
Morehead, Kentucky
Director: L. Bradley Clough, Ph.D.

Grambling College
Special Education Center
Grambling, Louisiana
Director: Famore J. Carter, Ph.D.

Louisiana State University
Department of Speech
Speech and Hearing Clinic
Baton Rouge, Louisiana 70803
Director: Stuart I. Gilmore

Louisiana State University in New Orleans
Special Education Center
Lakefront
New Orleans 22, Louisiana
Director: Dr. Alfred Stern, Ph.D.

Northeast Louisiana State College
Department of Special Education
Special Education Center
Monroe, Louisiana
Director: Dr. Levelle Haynes

Northwestern State College
Department of Special Education
Special Education Center
Natchitoches, Louisiana
Director: M. J. Cousins, Ph.D.

University of Southwestern Louisiana
Department of Special Education
Special Education Center
Box 515 U.S.L.
Lafayette, Louisiana
Director: Dr. Charles J. Faulk

Boston University
Department of Special Education
Psycho-Educational Clinic
765 Commonwealth Avenue
Boston, Massachusetts 02115
Director: Albert T. Murphy

State College
Department of Special Education
Fitchburg, Massachusetts
Director: William J. Goldman

Coppin State College
Department of Special Education
2500 W. North Avenue
Baltimore, Maryland
Director: Dr. Peter Valletutti

Central Michigan University
Department of Education
Psycho-Educational Clinic
Mt. Pleasant, Michigan 48858

University of Michigan
Division of Reading Improvement Services
Bureau of Psychological Services
1610 Washtenaw
Ann Arbor, Michigan
Director: Donald E. P. Smith

Wayne State University
Department of Speech and Special Education
Speech and Hearing Center
5900 Second Avenue
Detroit, Michigan 48202
Director: George A. Kopp, Ph.D.

University of Mississippi
University Medical Center
School of Medicine
Department of Pediatrics
Child Development Clinic
Jackson, Mississippi
Director: Margaret Bailly Batson, M.D., Ph.D.

University of Southern Mississippi
Department of Speech and Hearing Sciences
Special Education and Psychological Clinic
Southern Station
Hattiesburg, Mississippi
Executive Director: Dr. Erl Mehearg
Department Director: Dr. Robert Peters

Missouri State Teachers College
Department of Special Programs
Reading Clinic
Speech and Hearing Clinic
Violette Hall
Kirksville, Missouri 63501
Director: William Hall, M.D.
Reading Department Head: Mrs. Viola Martin

St. Louis University
Department of Speech
Speech and Hearing Clinics
15 N. Grand Boulevard
St. Louis, Missouri
Director: Barbara J. Seelye, Ph.D.

University of Nebraska
College of Medicine
Department of Pediatrics
Evaluation and Counseling Clinic
Omaha, Nebraska
Director: Robert B. Kugel, M.D.

Newark State College
Department of Special Education
Child Study Center: Evaluation, Psychological, Speech, Hearing, Reading, Orthodontic Clinics
Union, New Jersey 07083
Director: Edward L. LaCrosse, Ed.D.

State College
Department of Education
Reading Clinic--Child Study Center
Union, New Jersey
Director: Dr. Sam Laurie

Trenton State College
Child Study and Demonstration Center
Trenton, New Jersey
Director: Dr. Robert Micali

University of New Mexico
College of Education
Department of Education, Guidance and Counseling
Manzanita Center
Albuquerque, New Mexico
Director: George L. Keppers

Brooklyn College
Department of Education
Educational Clinic
Brooklyn, New York 11210
Director: Professor Samuel Goldberg, Ph.D.

Hofstra University
The Reading Center
Hempstead, New York 11550
Director: Dr. Miriam Schleich

New York University
Bellevue Medical Center
Department of Neurology and Psychiatry
Language Research Unit
550 First Avenue
New York City, New York
Director: S. B. Wortis, Chairman

New York University
Bellevue Medical Center
Department of Psychiatry
Language Research Unit
550 First Avenue
New York City, New York 10016
Director: Archie A. Silver, M.D.

Syracuse University
School of Education
Syracuse, New York 13210
Directer, Dean Krathwohl

Duke University
Medical Center
Division of Medical Psychology
Department of Psychiatry
Durham, North Carolina
Director: R. C. Carson

Minot State College
Department of Special Education
Speech and Hearing Clinic
Minot, North Dakota 58701
Director: Edna Gelbert, Ph.D.

University of North Dakota
Evaluation Center for Exceptional Children
Grand Forks, North Dakota
Director: Louis B. Silverman, M.D.

Kent State University
College of Education
Educational Child Study Center
Kent, Ohio 44240
Director: Dr. Marjorie Snyder

Kent State University
Department of Psychology
Psychological Clinic
Kent, Ohio 44240
Director: Dr. Arvin I. Lubetkin

Otterbein College
Educational Development Laboratory
Westerville, Ohio
Director: Dr. Benjamin Center

The University of Akron
Department of Speech
Speech and Hearing Clinic
222 James Street
Akron, Ohio 44304
Director: Dr. E. J. Hittle

Oregon College of Education
Department of Special Education
and Rehabilitation
Education Evaluation Center
Monmouth, Oregon
Director: Dr. Donald H. Duncan

University of Oregon
School of Education
DeBusk Memorial Center
Eugene, Oregon
Director, Ruth Waugh

Indiana University of Pennsylvania
Department of Special Education
and Clinical Services
Campus Laboratory School
Indiana, Pennsylvania 15701
Chairman: Dr. Morton Morris

Temple University
Laboratory School of the Reading Clinic
Cheltenham and Sedgwick Avenues
Philadelphia, Pennsylvania 19150
Director: Dr. Paul Daniels

University of Pennsylvania
Graduate School of Education
Reading Clinic
3700 Walnut Street
Philadelphia, Pennsylvania 19104
Director: Ralph C. Preston, Ph.D.

Augustana College
Crippled Children's Hospital and School
Department of Speech Education
Sioux Falls, South Dakota

Peabody College
Child Study Center
Box 158
Nashville, Tennessee
Director: Donald Neville

University of Tennessee
Department of Curriculum and Instruction
College of Education
Reading Center
Knoxville, Tennessee
Director: W. C. Davies, Ph.D.

Abilene Christian College
Department of Speech
Station ACC
Abilene, Texas 79601
Director: Ima F. Clevenger, Ph.D.

Southern Methodist University
Department of Education
Reading Clinic
Dallas, Texas 75222
Director: Dorothy Kendall Bracken

Southwest Texas State College
San Marcos, Texas 78666
Director: Empress Y. Zedler, Ph.D.

Texas Woman's University Institute for
Mental and Physical Development
Drawer E TWU Station
Denton, Texas
Director: Ted W. Booker, Ph.D.

University of Texas
Department of Pediatrics
Medical Branch
Child Development Clinic
Galveston, Texas 77550
Director: ArrNell Boelsche, M.D.

University of Texas
Medical Branch
Department of Neurology and Psychiatry
Division of Child Psychiatry
Galveston, Texas
Director: Henry L. Burks, M.D.

West Texas State University
Department of Speech, Education and
Psychology
Canyon, Texas 79016
Directors: Dr. Wendell Cain,
Dr. Ruth Lowes

University of Utah
Speech and Hearing Center
1699 East 5th Street, South
Salt Lake City, Utah
Director: M. J. Macham, Ph.D.

Old Dominion College
School of Education
Child Study Center
Hampton, Blvd.
Norfolk, Virginia 23508

University of Richmond
Psychology Department
Center for Psychological Services
Post Office Box 38
Richmond, Virginia 23173
Director: Jean N. Dickinson

University of Virginia
Speech and Hearing Center
Department of Speech Pathology and
Audiology
109 Cabell Hall
Charlottesville, Virginia 22903
Director: Helen G. Burr, Ph.D.

University of Washington
Department of Pediatrics
Division of Child Health
4701 24th Avenue, N.E.
Seattle, Washington
Director: Robert W. Deisher, M.D.

University of Washington
Department of Pediatrics
Division of Child Health
Child Development Program
4701 24th Street, N.E.
Seattle, Washington
Director: Robert Deisher, M.D.

University of Wisconsin
Reading Clinic
3203 N. Downer Avenue
Milwaukee, Wisconsin
Director: Dr. Arthur Schoeller

Wisconsin State University
Department of Speech Pathology and
Audiology
Speech and Hearing Clinic
Stevens Point, Wisconsin
Director: Dr. Gerald F. Johnson

MANUSCRIPT II

Correspondence to any of these school systems should be addressed as follows:

Reading Coordinator
% Name of School System
City, State, Zip Code

Bell Gardens, California

Downey, California

Broward County, Florida

Palm Beach County, Florida

Albany, Georgia

Columbus, Georgia

DeKalb County, Georgia

Detroit, Michigan

Robbinsdale, Minnesota

St. Louis, Missouri

Buffalo, New York

Philadelphia, Pennsylvania

Temple University, Philadelphia, Pennsylvania

Appleton, Wisconsin

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9 Cohen, Ruth Isenberg, "Remedial Training of First Grade Children with Visual Perceptual Retardation," Educational Horizons, 45, (Winter, 1966-67), 60-63.

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